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NEWS EXPRESS JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
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NEWS LOGIN Welcome Banner and News Items  
NEWS IPC8 For general information regarding STN implementation of IPC 8  
NEWS X25 X.25 communication option no longer available

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L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR

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=> s l1 sss sam

SAMPLE SEARCH INITIATED 13:51:05 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 2168 TO ITERATE

92.3% PROCESSED	2000 ITERATIONS	3 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)		
SEARCH TIME: 00.00.01		

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 40567 TO 46153

PROJECTED ANSWERS: 3 TO 173

L2 3 SEA SSS SAM L1

=> s l1 sss full

FULL SEARCH INITIATED 13:51:12 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 43347 TO ITERATE

100.0% PROCESSED	43347 ITERATIONS	104 ANSWERS
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SEARCH TIME: 00.00.02

L3 104 SEA SSS FUL L1

=> file caplus

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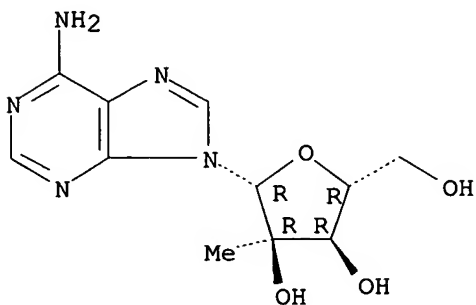
L4 55 L3

=> d bib abs hitstr 45-55 14

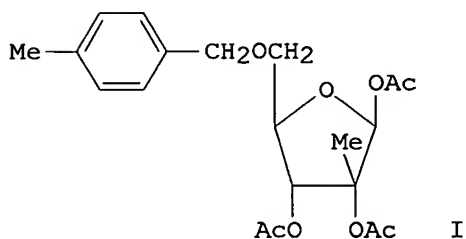
L4 ANSWER 45 OF 55 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 1989:71643 CAPLUS  
DN 110:71643  
TI Substrate specificity of adenosine deaminase: role of methyl groups at 2',3'- and 5'-positions of adenosine  
AU Kalinichenko, E. N.; Beigel'man, L. N.; Mikhailov, S. N.; Mikhailopulo, I. A.  
CS Inst. Bioorg. Chem., Minsk, USSR  
SO Bioorganicheskaya Khimiya (1988), 14(9), 1157-61  
CODEN: BIKHD7; ISSN: 0132-3423  
DT Journal  
LA Russian  
AB The substrate specificity of adenosine deaminase was studied using C'-Me derivs. of adenosine. On the basis of the correlation revealed between conformations of 2'- and 3'-C-methyladenosine and their substrate properties, a modified stereochem. model is suggested: the enzyme accepts the substrate within a N-type conformational range (4E+4T3+3E) of the furanose ring. The model was analyzed in detail using a number of C3'-modified adenosines and 5'-C-methyladenosine analogs with D-allo- and L-talo-configuration.  
IT 15397-12-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with adenosine deaminase, kinetics of)  
RN 15397-12-3 CAPLUS

CN Adenosine, 2'-C-methyl- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

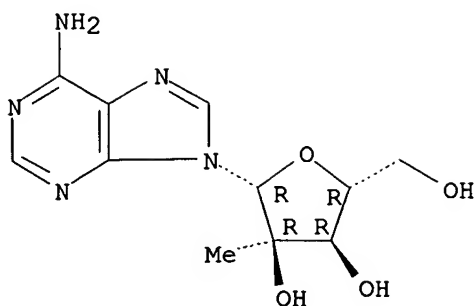


L4 ANSWER 46 OF 55 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 1988:204993 CAPLUS  
DN 108:204993  
TI New syntheses of 2'-C-methyl nucleosides starting from D-glucose and D-ribose  
AU Beigelman, L. N.; Ermolinskii, B. S.; Gurskaya, G. V.; Tsapkina, E. N.; Karpeiskii, M. Ya.; Mikhailov, S. N.  
CS Inst. Mol. Biol., Moscow, USSR  
SO Carbohydrate Research (1987), 166(2), 219-32  
CODEN: CRBRAT; ISSN: 0008-6215  
DT Journal  
LA English  
OS CASREACT 108:204993  
GI



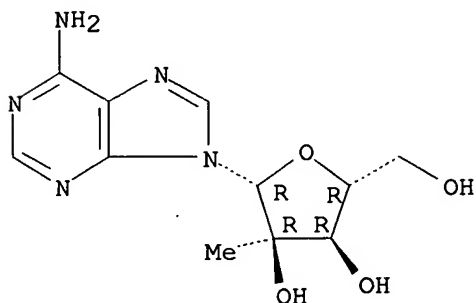
AB Effective general methods have been developed for the synthesis of 2'-C-methylnucleosides from D-glucose and D-ribose. 3-O-Benzyl-1,2-O-isopropylidene-3-C-methyl-O-D-allofuranose was prepared in 5 steps from D-glucose and converted into 1,2,3-dtri-O-acetyl-2-C-methyl-5-O-p-methylbenzoyl-D-ribofuranose (I). I was also synthesized from 2-C-hydroxymethyl-2,3-O-isopropylidene-5-O-trityl-D-ribofuranose, prepared in 3 steps from D-ribose. Condensation of I with the bis(trimethylsilyl) derivs. of uracil, N4-benzoylcytosine, and N6-benzoyladenine in the presence of F3CSO3SiMe3 followed by removal of the protecting acyl groups yielded the 2'-C-methylnucleosides.  
IT 15397-12-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 15397-12-3 CAPLUS  
CN Adenosine, 2'-C-methyl- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 47 OF 55 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1988:146857 CAPLUS  
 DN 108:146857  
 TI 2'-, 3'- And 5'-C-Methyl derivatives of uridine in the reaction of  
 microbiological transglycosylation  
 AU Zinchenko, A. I.; Barai, V. N.; Eroshevskaya, L. A.; Beigel'man, L. N.;  
 Mikhailov, S. N.; Karpeiskii, M. Ya.; Mikhailopulo, I. A.  
 CS Inst. Mikrobiol., Moscow, USSR  
 SO Doklady Akademii Nauk SSSR (1987), 297(3), 731-4 [Biochem.]  
 CODEN: DANKAS; ISSN: 0002-3264  
 DT Journal  
 LA Russian  
 AB Transglycosylation of uridine and its Me derivs. was carried out by cell  
 suspensions of Escherichia coli. The reaction was catalyzed by uridine  
 phosphorylase and purine nucleoside phosphorylase which were detected in  
 cell-free exts. The products (adenine nucleosides) from uridine, uracil  
 alloside, and uracil taloside were obtained at a yield of 100, 42, and  
 .2%, resp. 2'-C-Methyluridine and 3-C-methyluridine did not undergo any  
 transglycosylation, suggesting that the 5'-C-Me group is crucial for the  
 reaction to take place.  
 IT 15397-12-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, by microbial transglycosylation of methyluridine)  
 RN 15397-12-3 CAPLUS  
 CN Adenosine, 2'-C-methyl- (8CI, 9CI) (CA INDEX NAME)

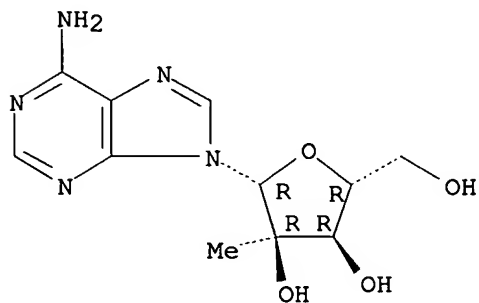
Absolute stereochemistry.



L4 ANSWER 48 OF 55 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1980:560970 CAPLUS  
 DN 93:160970  
 TI Adenosine receptor activation in human fibroblasts: nucleoside agonists  
 and antagonists

AU Bruns, Robert F.  
 CS Dep. Neurosci., Univ. California, La Jolla, CA, 92093, USA  
 SO Canadian Journal of Physiology and Pharmacology (1980), 58(6), 673-91  
 CODEN: CJPPA3; ISSN: 0008-4212  
 DT Journal  
 LA English  
 AB Adenosine [58-61-7] (ED50 15  $\mu$ M) causes a 50-fold increase in intracellular cyclic AMP in the VA13 human fibroblast line. A total of 128 nucleosides was tested as agonists and antagonists. Eight classes of compds. were found: full agonists (14 compds.), weak agonists (20), high-efficacy partial agonists (16), low-efficacy partial agonists (7), competitive inhibitors (11), noncompetitive inhibitors (3), partial agonist - noncompetitive inhibitors (3), and inactive compds. (54). The noncompetitive inhibitors antagonized the responses to adenosine, isoproterenol, and prostaglandin E1 and thus may have been adenylate cyclase inhibitors. The most potent noncompetitive inhibitor, 2',5'-dideoxyadenosine [6698-26-6] was a partial inhibitor, reducing the response to isoproterenol by only 77% even at very high concns. The most potent agonists, partial agonists, and pure antagonists had apparent affinities of about 5  $\mu$ M. Although all positions were important for affinity at the adenosine receptor, only the 3'- and 5'-positions and to a much lesser extent the 6- and 8-positions had an effect on efficacy. The receptor tolerated bulky groups at the 6-position of adenosine, had an Et-sized pocket near the 5'-position, and had little bulk tolerance towards modifications at other positions. Among the full agonists, only one 5'-derivative and one 2-position derivative had higher apparent affinity than adenosine. Studies with conformationally restricted agonists and antagonists showed that adenosine must be in the anti conformation in order to bind to the receptor.  
 IT 15397-12-3  
 RL: BIOL (Biological study)  
 (adenosine receptor response to, structure in relation to)  
 RN 15397-12-3 CAPLUS  
 CN Adenosine, 2'-C-methyl- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 49 OF 55 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1973:30124 CAPLUS  
 DN 78:30124  
 TI Solvolysis of adenine nucleosides. I. Effects of sugars and adenine substituents on acid solvolyses  
 AU Garrett, Edward R.; Mehta, P. J.  
 CS Coll. Pharm., Univ. Florida, Gainesville, FL, USA  
 SO Journal of the American Chemical Society (1972), 94(24), 8532-41  
 CODEN: JACSAT; ISSN: 0002-7863  
 DT Journal

LA English

AB The acidic solvolyses of 2',3'-dideoxyadenosine > 2'-deoxyadenosine > 9- $\beta$ -D-psicofuranosyladenine » 3'-deoxyadenosine > 8-bromoadenosine > 9- $\beta$ -D-arabinofuranosyladenine .apprx. 2-chloroadenosine .apprx. N6-methyladenosine .gtorsim. adenosine .apprx. 2-methyladenosine > 1-methyladenosine .apprx. N6,N6-dimethyladenosine .gtorsim. 9- $\beta$ -D-xylofuranosyladenine > 8-methoxyadenosine .apprx. 2'-C-methyladenosine gave the resp. sugar and stable adenine moiety except in the case of where the resultant 1-methyladenine was more slowly transformed into 5-aminoimidazole-4-N'-methylcarboxamide. The ranking of relative activities are given above for 80° in 0.10M HCl. Only specific acid catalyzed solvolyses of the protonated and non-protonated species were observed and there was no maximum in solvolysis rate in the low pH region, supporting the argument against a Schiff base intermediate subsequent to ethereal oxygen attack. The probability of an A-1 mechanism for solvolyses of diprotonated adenine nucleosides with protons on the nitrogens in the 1 and 7 positions was favored by the fact that the entropies of activation,  $\Delta S_{\ddagger}$ , were close to zero. Although the inductive effect of the 2'-OH inhibited acid solvolysis, a less significant increase in reactivity was introduced by the substitution of a hydrogen for the 3'-OH. The effects of substituents on the pyrimidine ring lead to only minor effects in reactivity whereas substitution of Br or MeO on C-8 of the imidazole portion has a more pronounced effect. The 1-methyladenosine cation solvolyses in acid at about the same rate as the adenosine cation strongly suggesting that it is the 1-protonated form of the latter that reacts with a second proton to result in a solvolyzing dication.

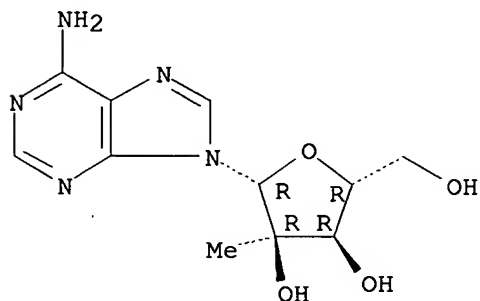
IT 15397-12-3

RL: RCT (Reactant); RACT (Reactant or reagent)  
(solvolysis of)

RN 15397-12-3 CAPLUS

CN Adenosine, 2'-C-methyl- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 50 OF 55 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1971:23087 CAPLUS

DN 74:23087

TI Nucleosides of branched-chain nitromethyl, cyanomethyl, and aminomethyl sugars

AU Rosenthal, Alex; Sprinzl, Matej; Baker, Donald A.

CS Dep. Chem., Univ. British Columbia, Vancouver, BC, Can.

SO Tetrahedron Letters (1970), (48), 4233-5

CODEN: TELEAY; ISSN: 0040-4039

DT Journal

LA English

GI For diagram(s), see printed CA Issue.

AB The oxidation of 9-(3,5-O-isopropylidene- $\beta$ -D-xylofuranosyl)adenine with

RuO4 gave the 2'-oxo-derivative, which, upon treatment with MeNO2 and NaOMe gave I. Reduction of I with Pd gave 9-(2-C-acetamidomethyl-3,5-O-isopropylidene- $\beta$ -D-lyxofuranosyl)adenine. The condensation of 1,2:5,6-di-O-isopropylidene- $\alpha$ -D-ribo-hexofuranos-3-ulose with di-Et cyanomethylphosphonate in the presence of NaH, followed by hydrogenation over Pd, gave II. Selective hydrolysis of II followed by benzylation, hydrolysis of the 1,2-O-isopropylidene group and acetylation gave III. Frsion of III with 6-chloropurine gave 6-chloro-9-(2-O-acetyl-5,6-di-O-benzoyl-3,C-cyanomethyl-3-deoxy- $\beta$ -D-allofuranosyl)purine which upon treatment with Me2NH gave 6-dimethylamino-9-(3-C-cyanomethyl-3-deoxy- $\beta$ -D-allofuranosyl)purine.

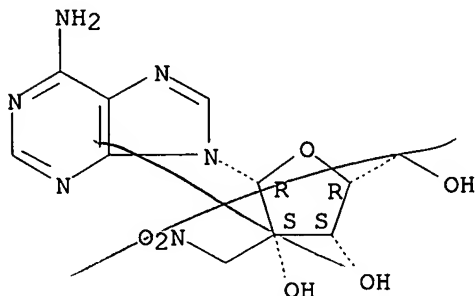
IT 30737-89-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 30737-89-4 CAPLUS

CN Adenine, 9-[2-C-(nitromethyl)- $\beta$ -D-lyxofuranosyl]- (8CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 51 OF 55 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1970:404136 CAPLUS

DN 73:4136

TI Mass spectrometry of nucleic acid components. Analogs of adenosine

AU Shaw, Stanley James; Desiderio, Dominic M.; Tsuboyama, Kaoru; McCloskey, James A.

CS Inst. for Lipid Res., Baylor Coll. of Med., Houston, TX, USA

SO Journal of the American Chemical Society (1970), 92(8), 2510-22

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA English

AB The mass spectra of adenosine and 32 of its analogs were studied in detail. Principal fragmentation pathways for structurally significant ions were determined and decomposition mechanisms postulated, based on metastable

transitions, deuterium and substituent labels, and high-resolution mass spectra. The major ions  $M - 30$ , base  $+44$ , and base  $+30$  are proposed to arise from initial transfer of sugar hydroxyl hydrogens to the charge-localized purine base. Methylation at N6 is characterized by elimination of MeN6 with rearrangement of either H or a Me group as previously reported for the corresponding bases. 2'-O-Methylation leads to a unique sugar fragment resulting from elimination of the base plus a 3'- or 5'-hydroxyl H. Anomers are readily distinguished by their mass spectra, but steric orientation of sugar hydroxyls cannot be determined directly. However the abundance of the  $M - 30$  ion was found to depend strongly on the steric accessibility of C-5' to the base.

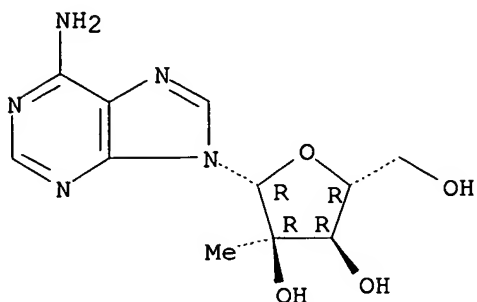
IT 15397-12-3

RL: PRP (Properties)



(mass spectrum of)  
 RN 15397-12-3 CAPLUS  
 CN Adenosine, 2'-C-methyl- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



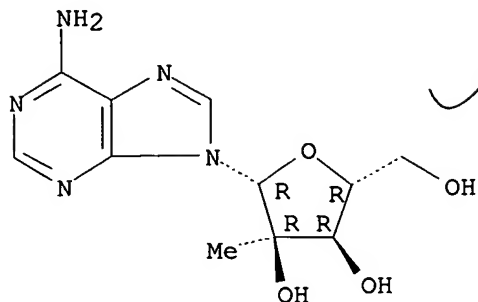
L4 ANSWER 52 OF 55 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1969:502192 CAPLUS  
 DN 71:102192  
 TI Substituted purine nucleosides  
 IN Walton, Edward  
 PA Merck and Co., Inc.  
 SO Fr., 11 pp.  
 CODEN: FRXXAK  
 DT Patent  
 LA French  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 1521076		19680412	FR 1967-104388	19670427
	DE 1593110			DE	
	DE 1620053			DE	
	DE 1695411			DE	
	DE 1768470			DE	
	DE 1770700			DE	
	GB 1163102			GB	
	GB 1187824			GB	
	GB 1187825			GB	
	US 3480613		19691125	US	19670703
PRAI	US		19660502		

AB The title compds. (I), which were useful in preparing nucleotides for the study of nucleic acid metabolism were prepared by treating 2,6-substituted chloromercuri-purines with 2,3,5,-tri-O-acyl-2-methyl-D-ribofuranosyl halides to give 2,6-substituted 9-(2,3,5,-tri-O-acyl-2-C-methyl-D-ribofuranosyl) purines which were solvolized, aminolyzed, or mercaptolyzed. Thus, a solution of 5 g. 2-C-methyl-D-ribo-1,4-lactone in 100 cc. dry pyridine at 5° was treated with 17 cc. BzCl, heated 65-70° 4 hrs., and kept at room temperature 6 hrs. to give 60% 2,3,5-tri-O-benzoyl-2-C-methyl-D-ribo-1,4-lactone (II) m. 138-40°. A solution 7 g. II in 30 cc. dry tetrahydrofuran under N was cooled and treated with 58.8 cc. M di-sec-isoamyl-borane, kept at room temperature 16 hrs., 6 cc. H2O added, refluxed 0.5 hr., and at 5°, 11.5 cc. H2O2 added keeping the pH 7-8 by the addition of about 7 cc. 3N Na2CO3 to give 37% 2,3,5-tri-O-benzoyl-2-C-methyl-(α and β)-D-ribofuranose (III) purified by chromatog. on silica gel. A solution 4.2 g. III (containing a small amount of 3,5-di-O-benzoyl-2-C-methyl-(α,β)-D-ribofuranose) in 80 cc. dry pyridine was treated with 8.0 cc. BzCl and heated at 90° for 4 hrs. to give 42% 1,2,3,5-tetra-O-benzoyl-2-C-

methyl- $\beta$ -D-ribofuranose (IV), m. 155-6°, and 57%  
 1,2,3,5-tetra-O-benzoyl-2-C-methyl- $\alpha$ -D-ribofuranose (V) as an oil.  
 to 100 cc. of a saturated HCl Et<sub>2</sub>O solution was added 2 cc. AcCl and 1.5 g. IV  
 and the mixture kept at room temperature 2 hrs. to give  
 2,3,5-tri-O-benzoyl-2-C-  
 methyl- $\beta$ -D-ribofuranosyl chloride (VI). A solution of 1.5 g. V in 7.5  
 cc. AcOH was treated with a solution of 0.25 cc. AcBr and 7.5 cc. 32% HBr in  
 AcOH and the mixture kept at 25° 24 hrs. to give 2,3,5-tri-O-benzoyl-  
 2-C-methyl- $\beta$ -D-ribofuranosyl bromide. From a suspension of 5.95 g.  
 2-acetamido-9-chloromercuri-6-hydroxypurine in 175 cc. xylene about 25 cc.  
 of xylene was distilled to remove traces of H<sub>2</sub>O, the VI prepared from 8.1 g. IV  
 in 25 cc. dry xylene was added, and the mixture stirred at 50-100°  
 and refluxed 1 hr. to give 2-acetamido-9-(2,3,5-tri-O-benzoyl-2-methyl-D-  
 ribofuranosyl)-6-hydroxypurine (VII). Similarly prepared were:  
 6-N-methyl-9-(2,3,5-tri-O-benzoyl-C-methyl-D-ribofuranosyl)benzamidopurine  
 (VIII); 6-chloro-9-(2,3,5-tri-O-benzoyl-2-C-methyl-D-ribofuranosyl)purine  
 (IX); 2,6-dibenzamido-9-(2,3,5-tri-O-benzoyl-2-C-methyl-D-  
 ribofuranosyl)purine (X); 6-methyl-9-(2,3,5-tri-O-benzoyl-2-C-methyl-D-  
 ribofuranosyl)purine (XI); 6-benzamido-9-(2,3,5-tri-O-benzoyl-2-C-methyl-D-  
 ribofuranosyl)purine (XII). A suspension of 1.0 g. IX in 25 cc. MeOH  
 containing 6.5 g. Me<sub>2</sub>NH was heated 10 hrs. in a sealed tube at 100° and  
 concentrated in vacuo and the residue dissolved in 25 cc. H<sub>2</sub>O, washed with  
 C<sub>6</sub>H<sub>6</sub>,  
 and treated with 2 g. Dowex II-X8 strongly basic anion-exchange resin to  
 give I (R<sub>1</sub> = Me<sub>2</sub>N, R = H). A mixture of 1.2 g. X in 12 cc. dry MeOH was  
 treated with 97 mg. Na in 12 cc. MeOH and refluxed 3 hrs. to give I (R =  
 R<sub>1</sub> = NH<sub>2</sub>). A suspension of 1.25 g. IX and 307 mg. thiourea in 3 cc. EtOH  
 was refluxed 40 min. to give 9-(2,3,5-tri-O-benzoyl-2-C-methyl-D-  
 ribofuranosyl)purine-6-thiol, (XIII). A suspension of 400 mg. XIII in 3.5  
 cc. MeOH was treated with a solution prepared from 19.5 mg. Na in 3.5 cc. dry  
 MeOH and the mixture refluxed 3 hrs. to give I (R = H, R<sub>1</sub> = SH). A mixture 1  
 g. IX, 8 g. MeNH<sub>2</sub>, and 25 g. MeOH was heated at 100° 10 hrs. in a  
 sealed tube to give I (R = H, R<sub>1</sub> = NHMe). A solution of 1 g. IX in 17 cc.  
 dioxane, 80 mg. MgO, and 0.5 g. of 5% Pd on C was shaken 98 hrs. in a H  
 atmospheric at 25° to give 9-(2,3,5-tri-O-benzoyl-2-C-methyl-D-  
 ribofuranosyl)purine (XIV). A solution 400 mg. XIV in 8 cc. dry MeOH was  
 treated with a solution of 23 mg. Na in 8 cc. dry MeOH and refluxed 3 hrs. to  
 give I (R = R<sub>1</sub> = H). A suspension of 800 mg. VII in 8 cc. anhydrous MeOH was  
 treated with a solution of 105 mg. Na in 8 cc. dry MeOH and the mixture  
 refluxed 2 hrs. to give 9-(2-C-methyl-D-ribofuranosyl)guanine. A solution of  
 479 mg. IX in 20 cc. MeOH containing 2 g. NH<sub>3</sub> was kept at 5° 20 hrs. to  
 give I (R = H, R<sub>1</sub> = Cl). A suspension of 3.9 g. VIII in 40 cc. dry MeOH  
 was treated with a solution prepared from 175 mg. Na in 40 cc. dry MeOH, and  
 the mixture refluxed 3.5 hrs. to give I (R = H, R<sub>1</sub> = MeNH). A solution of 2.0  
 g. IX in 30 cc. EtOH containing 12 cc. EtNH<sub>2</sub> was heated in a sealed tube at  
 100° for 10 hrs. to give I (R = H, R<sub>1</sub> = NH<sub>2</sub>Et). A solution of 605 mg.  
 IX in 30 cc. dry MeOH was treated with a solution prepared by saturating 20  
 cc. of a  
 0.1N NaOMe solution with MeSH, and the mixture refluxed 30 min. to give I (R =  
 H, R<sub>1</sub> = SMe). A mixture of 590 mg. XI and 50 cc. dry MeOH was treated with  
 a solution prepared from 23 mg. Na and 10 cc. dry MeOH, and the mixture  
 refluxed  
 4 hrs. to give I (R = H, R<sub>1</sub> = Me). A mixture 1.48 g. XII and 15 cc. MeOH was  
 treated with a solution prepared from 70 mg. Na and 5 cc. MeOH, and the mixture  
 refluxed 45 min. to give 59% 2'-C-methyladenosine.  
 IT 15397-12-3P 25899-60-9P 25899-63-2P  
 25899-67-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 15397-12-3 CAPLUS  
 CN Adenosine, 2'-C-methyl- (8CI, 9CI) (CA INDEX NAME)

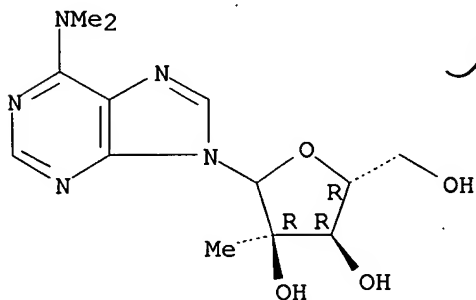
Absolute stereochemistry.



RN 25899-60-9 CAPLUS

CN Adenine, N,N-dimethyl-9-(2-C-methyl-D-ribofuranosyl)- (8CI) (CA INDEX NAME)

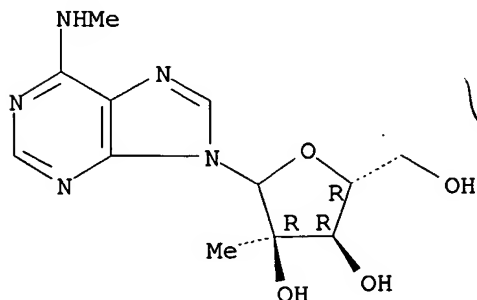
Absolute stereochemistry.



RN 25899-63-2 CAPLUS

CN Adenine, N-methyl-9-(2-C-methyl-D-ribofuranosyl)- (8CI) (CA INDEX NAME)

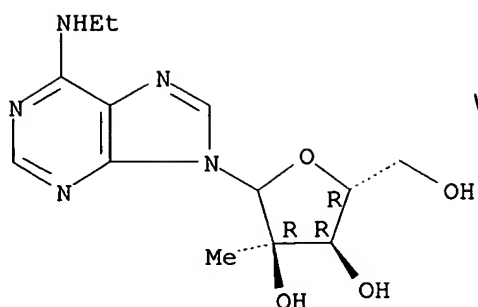
Absolute stereochemistry.



RN 25899-67-6 CAPLUS

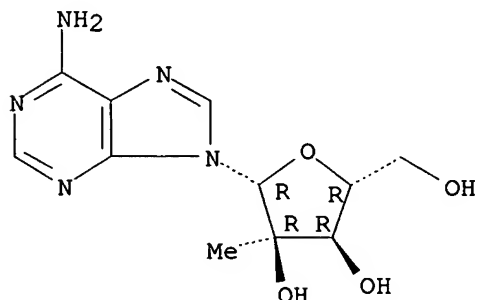
CN Adenine, N-ethyl-9-(2-C-methyl-D-ribofuranosyl)- (8CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 53 OF 55 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1969:403610 CAPLUS  
 DN 71:3610  
 TI Circular dichroism of nucleoside derivatives. VI. Optically active bands of adenine nucleoside derivatives  
 AU Miles, Daniel W.; Robins, Morris J.; Robins, Roland K.; Eyring, Henry  
 CS Univ. of Utah, Salt Lake City, UT, USA  
 SO Proceedings of the National Academy of Sciences of the United States of America (1969), 62(1), 22-9  
 CODEN: PNASA6; ISSN: 0027-8424  
 DT Journal  
 LA English  
 AB Structures and circular dichroism (CD) curves with several characteristic absorption curves of 17 purine nucleoside derivs. are presented. The CD data show that the 260 and 207 mμ absorption systems of the adenine chromophore contain at least 2 electronic transitions. The CD maxima, at 260, 240, 220, and 200 mμ, seem related in the 5 major base constituents of nucleic acids and derivs. The optically active transitions at these wavelengths are discussed. Solvent studies other than H2O at pH 7, including EtOH and methylcyclohexane, suggest the CD bands arise from  $\pi$ - $\pi^*$  transitions. A weak absorption band, with little rotatory power, that obeys the criteria of an  $n$ - $\pi^*$  band is resolved near 290 mμ in hydrocarbon solvents.  
 IT 15397-12-3  
 RL: PRP (Properties)  
 (circular dichroism of)  
 RN 15397-12-3 CAPLUS  
 CN Adenosine, 2'-C-methyl- (8CI, 9CI) (CA INDEX NAME)

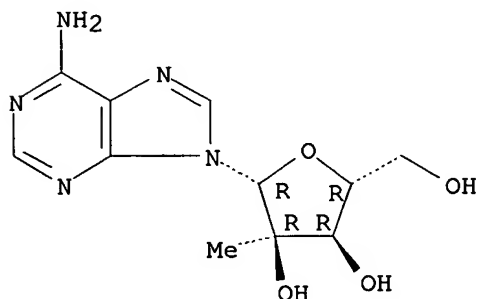
Absolute stereochemistry.



L4 ANSWER 54 OF 55 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1968:436399 CAPLUS  
 DN 69:36399

TI Branched-chain sugar nucleoside. IV. 2'-Methyladenosine  
 AU Jenkins, Susan R.; Arison, Byron; Walton, Edward  
 CS Merck Sharp and Dohme Res. Lab., Rahway, NJ, USA  
 SO Journal of Organic Chemistry (1968), 33(6), 2490-4  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DT Journal  
 LA English  
 GI For diagram(s), see printed CA Issue.  
 AB The synthesis of 2'-C-methyladenosine (I) is described. The required derivative of the previously unknown 2-C-methyl-D-ribofuranose was prepared starting with 2-C-methyl-D-ribo-1,4-lactone (II). II was completely benzoylated and the Bz derivative reduced with bis-(3-methyl-2-butyl)borane which produced a mixture of 2,3,5-tri-O-benzoyl-2-C-methyl- $\alpha$  (and  $\beta$ )-D-ribofuranose and 3,5-di-O-benzoyl-2-C-methyl- $\alpha$  (and  $\beta$ )-D-ribofuranose. This mixture was benzoylated to give a mixture of  $\alpha$  and  $\beta$  tetrabenzoates which was converted into 2,3,5-tri-O-benzoyl-2-C-methyl- $\beta$ -D-ribofuranosyl chloride (III). III reacted with chloromercuri-6-benzamidopurine to give the completely acylated nucleoside. Catalytic removal of the Bz blocking groups with NaOMe in MeOH led to the isolation of cryst.I. From N.M.R. spectral measurements and consideration of steric interactions, it is suggested that I exists in a 2'-oxo-3'-endo (T23) conformation and is, therefore, conformationally unrelated to adenosine. 18 references.  
 IT 15397-12-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 15397-12-3 CAPLUS  
 CN Adenosine, 2'-C-methyl- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 55 OF 55 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1967:95342 CAPLUS  
 DN 66:95342  
 TI Branched-chain sugar nucleosides. New type of biological active nucleoside  
 AU Walton, Edward; Jenkins, Susan R.; Nutt, Ruth F.; Zimmerman, Morris; Holly, Frederick W.  
 CS Merck Sharp and Dohme Res. Labs., Rahway, NJ, USA  
 SO Journal of the American Chemical Society (1966), 88(19), 4524-5  
 CODEN: JACSAT; ISSN: 0002-7863  
 DT Journal  
 LA English  
 AB 2'-C-Methyladenosine (I) and 3'-C-methyladenosine (II), the first nucleosides of branched-chain sugars, were prepared in a search for analogs resistant to adenosine deaminase (LaPage and Junga, CA 62, 4429c). I was deaminated at a rate only 1/25th that of adenosine and II was not affected. At a concentration of 10  $\mu$ g./ml. they had 65 to 80% inhibitory

effect on KB cells in culture (Gitterman, et al., CA 63, 10496h). I was synthesized from 2,3,5-tri-O-benzoyl- $\alpha$ -D-glucosaccharinic acid lactone through reduction with bis(3-methyl-2-butyl)borane to 2,3,5-tri-O-benzoyl-2-C-methyl- $\alpha$ (and  $\beta$ )-D-ribofuranose and benzoylation to the tetrabenzoate which was resolved by chromatography into a solid (III) (presumably  $\beta$ ) and a sirup (IV) (presumably  $\alpha$ ). III and IV were converted into the same chloro derivative (V) by ethereal HCl, conversion of III being more rapid, probably because of an anchimeric effect. V reacted with chloromercuri-6-benzamidopurine to give amorphous 9-(2,3,5-tri-O-benzoyl-2-C-methyl- $\beta$  - D - ribofuranosyl) - 6 - benzamidopurine, which was purified on silica gel and was converted by NaOMe into I.

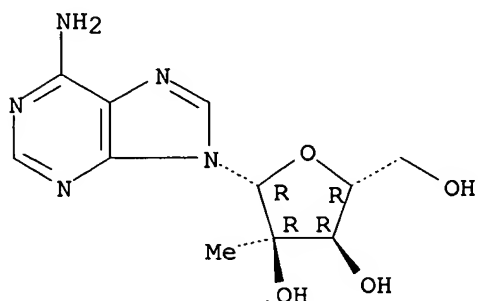
IT 15397-12-3P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 15397-12-3 CAPLUS

CN Adenosine, 2'-C-methyl- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



10/530,627

=> s 200362256/pn  
L9 0 200362256/PN

=> s wo 200362256/pn  
L10 1 WO 200362256/PN  
(WO2003062256/PN)

=> sel rn  
E1 THROUGH E39 ASSIGNED

=> file reg  
COST IN U.S. DOLLARS

SINCE FILE TOTAL  
ENTRY SESSION  
9.72 403.22

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE TOTAL  
ENTRY SESSION  
0.00 -8.25

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L11

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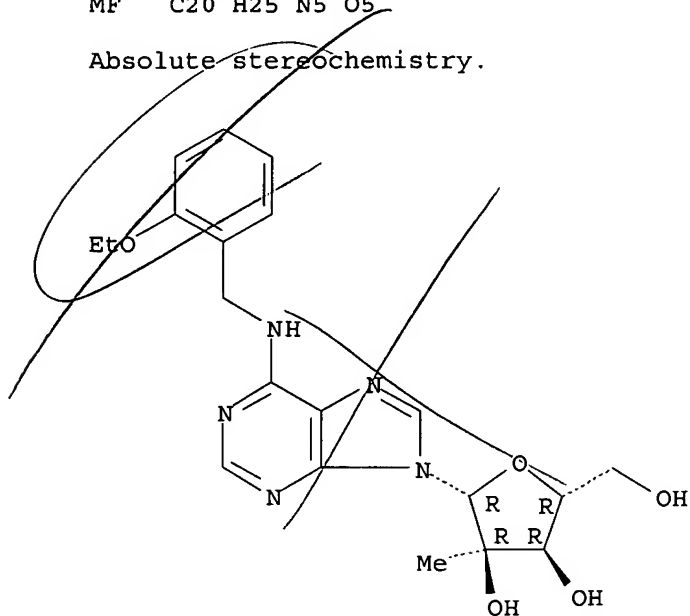


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6294-89-9/BI OR 7202-43-9/BI)

=> d scan l11

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Adenosine, N-[(2-ethoxyphenyl)methyl]-2'-C-methyl- (9CI)  
MF C20 H25 N5 O5

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):38

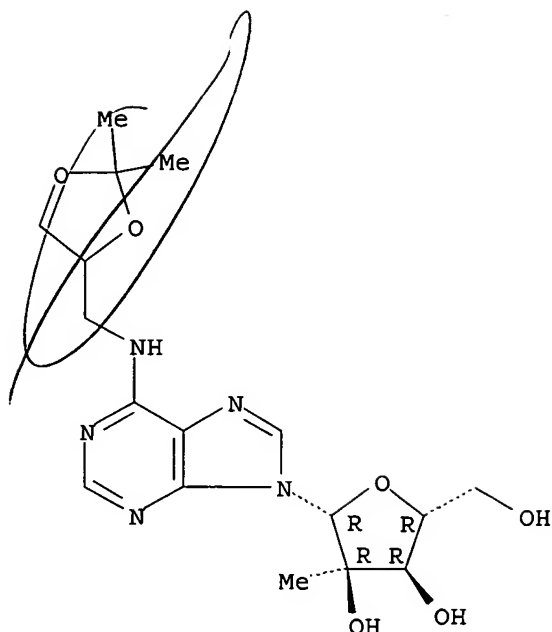
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Hydrazine, methyl- (6CI, 8CI, 9CI)  
MF C H6 N2  
CI COM

H<sub>3</sub>C-NH-NH<sub>2</sub>

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

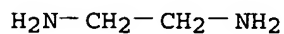
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Adenosine, N-[(2,2-dimethyl-1,3-dioxolan-4-yl)methyl]-2'-C-methyl- (9CI)  
MF C17 H25 N5 O6

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

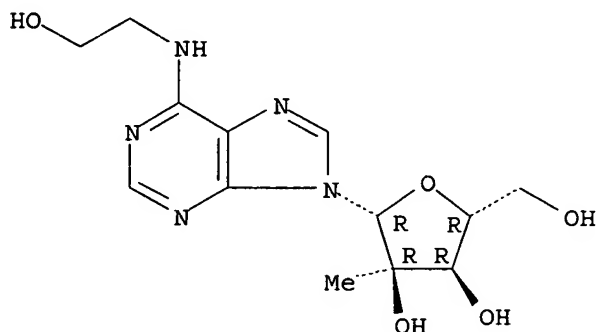
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN 1,2-Ethanediamine (9CI)  
 MF C2 H8 N2  
 CI COM



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Adenosine, N-(2-hydroxyethyl)-2'-C-methyl- (9CI)  
 MF C13 H19 N5 O5

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Ethanol, 2-hydrazino- (6CI, 7CI, 8CI, 9CI)

$$\text{HO}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{NH}_2$$

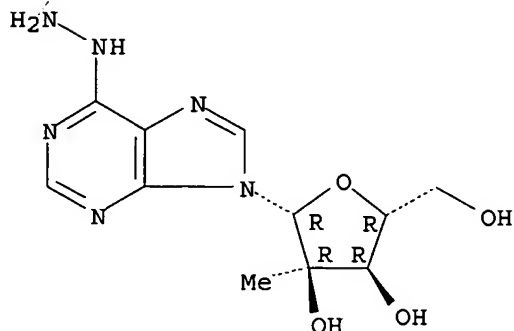
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Adenosine, N,N-bis(2-hydroxyethyl)-2'-C-methyl- (9CI)  
MF C15 H23 N5 O6

L11 39 ANSWERS ~~REGISTRY~~ COPYRIGHT 2006 ACS on STN  
IN Ethanol, 2-amino- (8CI, 9CI)  
MF C2 H7 N O  
CI COM

$$\text{H}_2\text{N}-\text{CH}_2-\text{CH}_2-\text{OH}$$

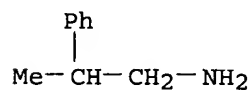
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Inosine, 2'-C-methyl-, hydrazone (9CI)  
MF C11 H16 N6 O4

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

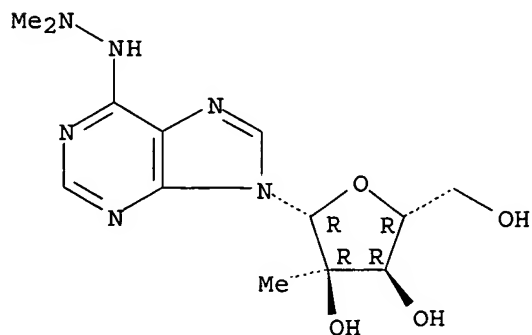
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Benzeneethanamine,  $\beta$ -methyl- (9CI)  
 MF C9 H13 N  
 CI COM



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

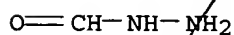
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Inosine, 2'-C-methyl-, 2,2-dimethylhydrazone (9CI)  
 MF C13 H20 N6 O4

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

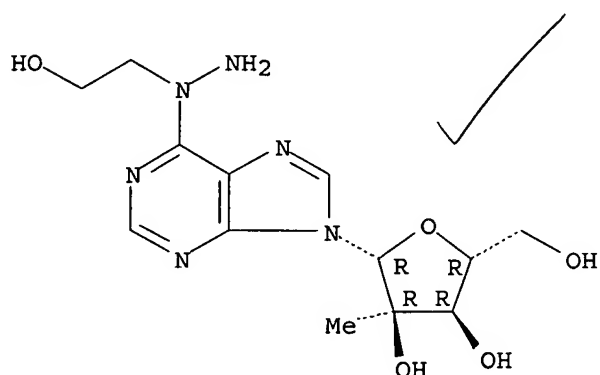
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Hydrazinecarboxaldehyde (9CI)  
 MF C H4 N2 O  
 CI COM



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

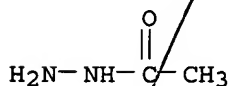
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Ethanol, 2-[1-[9-(2-C-methyl-β-D-ribofuranosyl)-9H-purin-6-yl]hydrazino]- (9CI)  
MF C13 H20 N6 O5

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

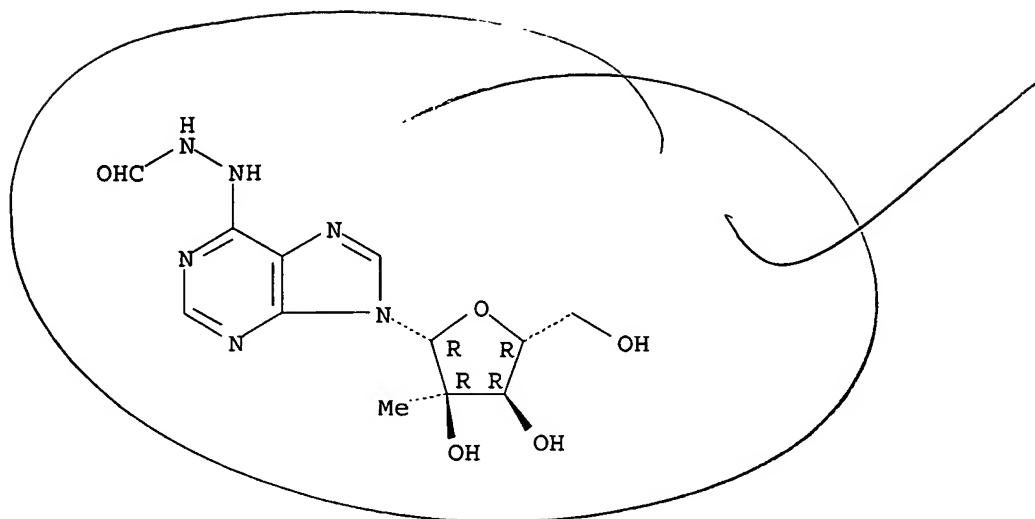
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Acetic acid, hydrazide (6CI, 7CI, 8CI, 9CI)  
MF C2 H6 N2 O  
CI COM



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

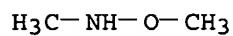
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Inosine, 2'-C-methyl-, formylhydrazone (9CI)  
MF C12 H16 N6 O5

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

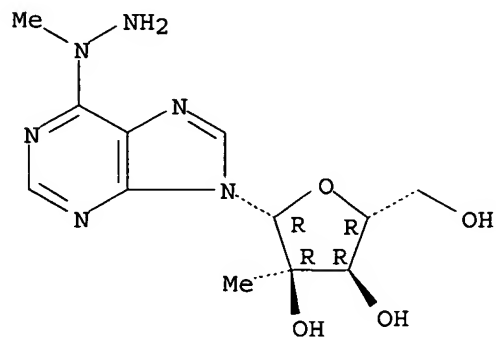
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Methanamine, N-methoxy- (9CI)  
 MF C2 H7 N O  
 CI COM



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

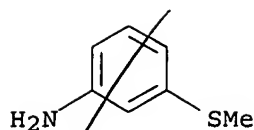
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN 9H-Purine, 6-(1-methylhydrazino)-9-(2-C-methyl-beta-D-ribofuranosyl)-  
 (9CI)  
 MF C12 H18 N6 O4

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

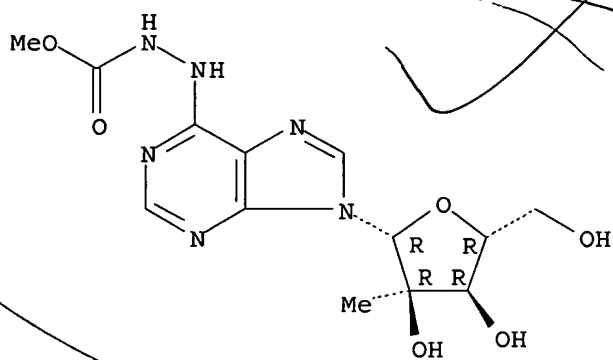
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Benzenamine, 3-(methylthio)- (9CI)  
 MF C7 H9 N S  
 CI COM



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

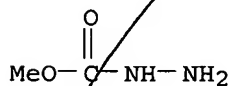
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Hydrazinecarboxylic acid, 2-[9-(2-C-methyl-β-D-ribofuranosyl)-9H-purin-6-yl]-, methyl ester (9CI)  
 MF C13 H18 N6 O6

Absolute stereochemistry.



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

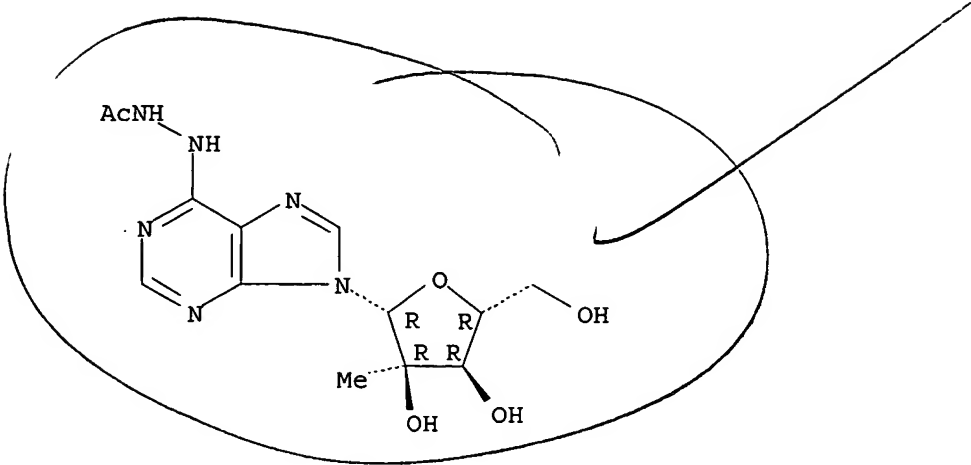
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Hydrazinecarboxylic acid, methyl ester (9CI)  
 MF C2 H6 N2 O2  
 CI COM



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Acetic acid, 2-[9-(2-C-methyl-β-D-ribofuranosyl)-9H-purin-6-yl]hydrazide (9CI)  
 MF C13 H18 N6 O5

Absolute stereochemistry.



L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN 2-Furanmethanamine, tetrahydro-, (2R)- (9CI)  
MF C5 H11 N O  
CI COM

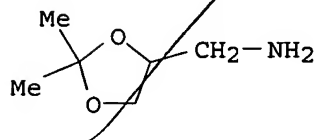
\*C1CCCCO1[C@H](\*)N

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Methanesulfonic acid, 2-[9-(2-C-methyl-β-D-ribofuranosyl)-9H-purin-6-  
yl]hydrazide (9CI)  
MF C12 H18 N6 O6 S

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN



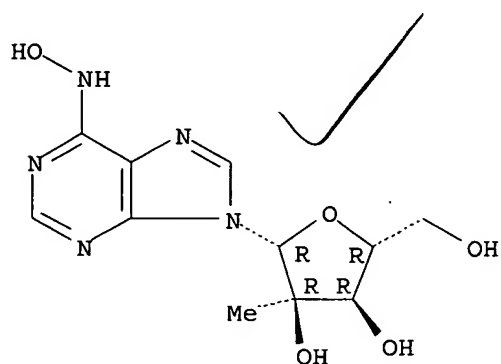
IN 1,3-Dioxolane-4-methanamine, 2,2-dimethyl- (9CI)  
MF C6 H13 N O2  
CI COM



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

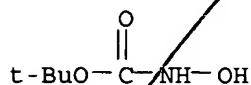
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Inosine, 2'-C-methyl-, oxime (9CI)  
MF C11 H15 N5 O5

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

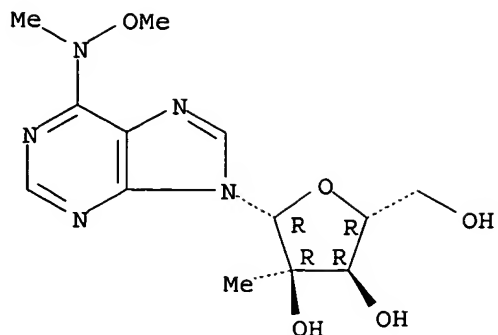
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Carbamic acid, hydroxy-, 1,1-dimethylethyl ester (9CI)  
MF C5 H11 N O3  
CI COM



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

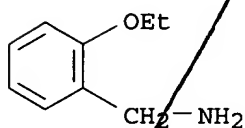
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Adenosine, N-methoxy-N-methyl-2'-C-methyl- (9CI)  
MF C13 H19 N5 O5

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

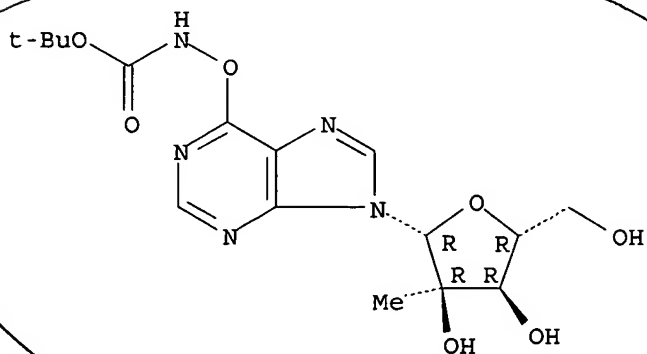
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Benzenemethanamine, 2-ethoxy- (9CI)  
 MF C9 H13 N O  
 CI COM



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Carbamic acid, [[9-(2-C-methyl-β-D-ribofuranosyl)-9H-purin-6-yl]oxy]-  
 , 1,1-dimethylethyl ester (9CI)  
 MF C16 H23 N5 O7

Absolute stereochemistry.

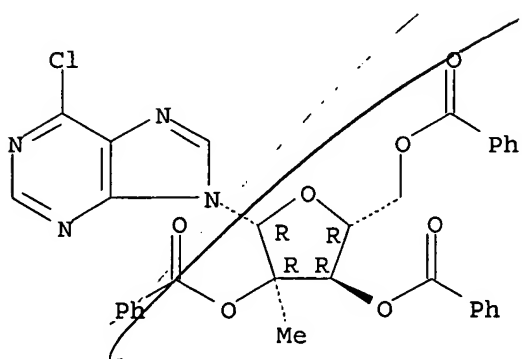


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN

IN 9H-Purine, 6-chloro-9-(2,3,5-tri-O-benzoyl-2-C-methyl-β-D-ribofuranosyl)- (9CI)  
 MF C32 H25 Cl N4 O7

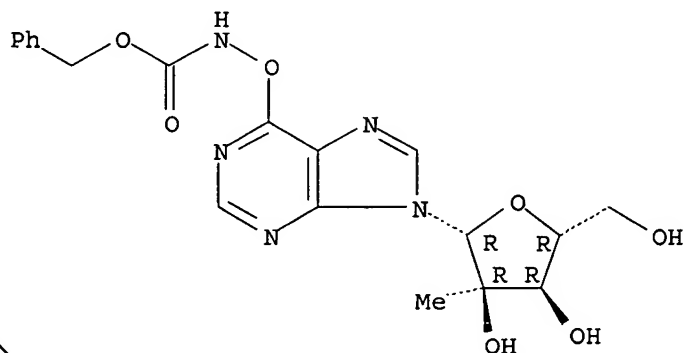
Absolute stereochemistry.



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Carbamic acid, [[9-(2-C-methyl-β-D-ribofuranosyl)-9H-purin-6-yl]oxy]-  
 , phenylmethyl ester (9CI)  
 MF C19 H21 N5 O7

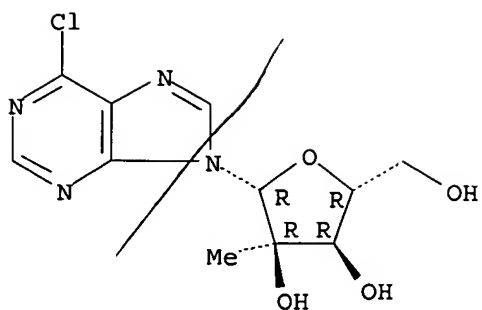
Absolute stereochemistry.



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN 9H-Purine, 6-chloro-9-(2-C-methyl-β-D-ribofuranosyl)- (9CI)  
 MF C11 H13 Cl N4 O4

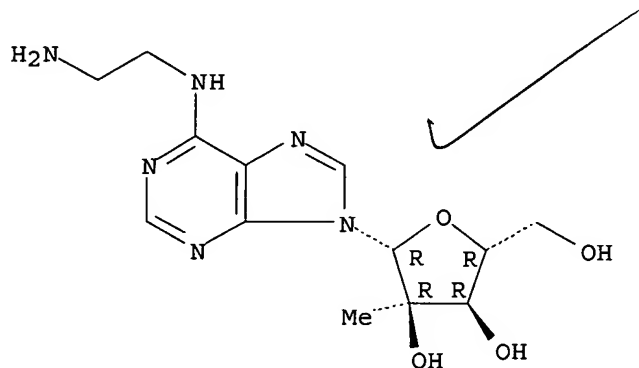
Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Adenosine, N-(2-aminoethyl)-2'-C-methyl- (9CI)  
 MF C13 H20 N6 O4

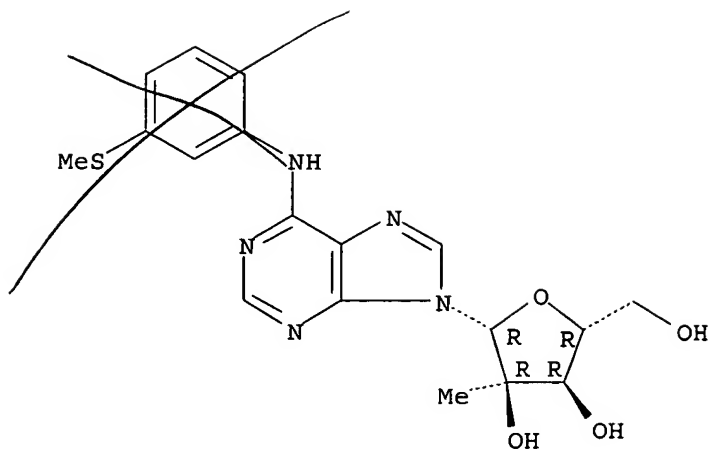
Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Adenosine, 2'-C-methyl-N-[3-(methylthio)phenyl]- (9CI)  
 MF C18 H21 N5 O4 S

Absolute stereochemistry.

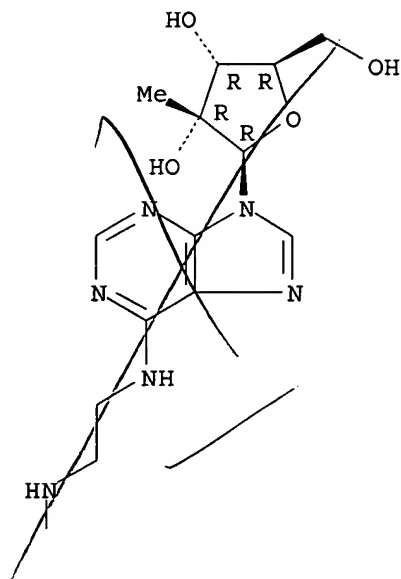


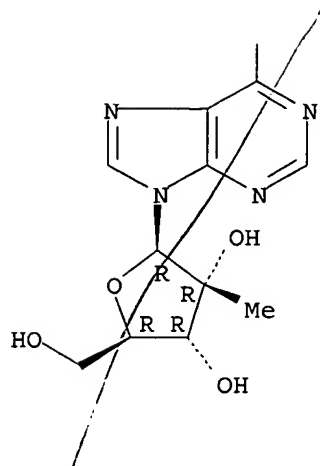
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Adenosine, N,N''-1,2-ethanediylbis[2'-C-methyl- (9CI)  
 MF C24 H32 N10 O8

Absolute stereochemistry.

PAGE 1-A

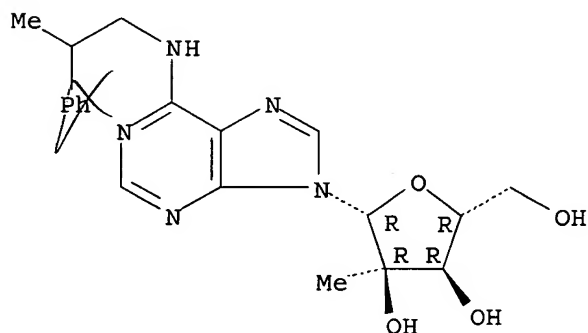




\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Adenosine, 2'-C-methyl-N-(2-phenylpropyl)- (9CI)  
 MF C20 H25 N5 O4

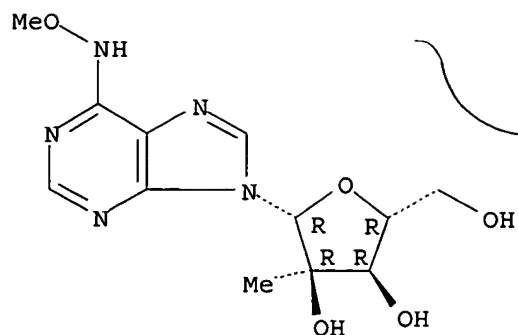
Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Inosine, 2'-C-methyl-, O-methyloxime (9CI)  
 MF C12 H17 N5 O5

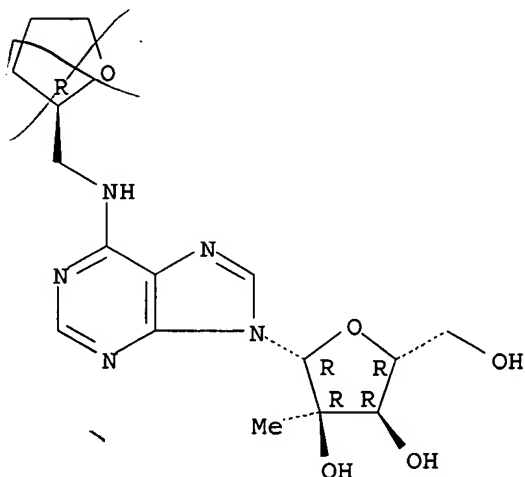
Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

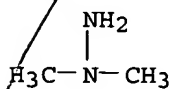
L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Adenosine, 2'-C-methyl-N-[[2R)-tetrahydro-2-furanyl]methyl]- (9CI)  
 MF C16 H23 N5 O5

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L11 39 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Hydrazine, 1,1-dimethyl- (8CI, 9CI)  
 MF C2 H8 N2  
 CI COM

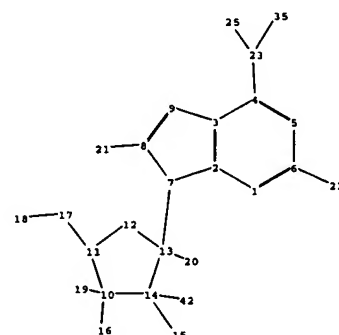
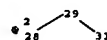
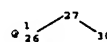
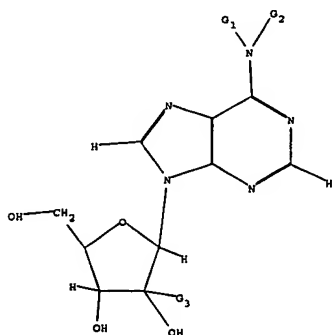
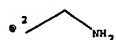
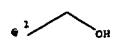


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

ALL ANSWERS HAVE BEEN SCANNED



10/530,627



chain nodes :

15 16 17 18 19 20 21 22 23 25 26 27 28 29 30 31 35 37 42

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14

ring/chain nodes :

36 38

chain bonds :

4-23 6-22 7-13 8-21 10-16 10-19 11-17 13-20 14-15 14-42 17-18 23-25 23-35 26-27 27-30  
28-29 29-31 37-38

ring bonds :

1-2 1-6 2-3 2-7 3-4 3-9 4-5 5-6 7-8 8-9 10-11 10-14 11-12 12-13 13-14

exact/norm bonds :

2-7 3-9 4-23 7-8 7-13 8-9 10-11 10-14 10-16 11-12 12-13 13-14 14-15 14-42 23-25 23-35  
27-30 29-31 37-38

exact bonds :

6-22 8-21 10-19 11-17 13-20 17-18 26-27 28-29

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

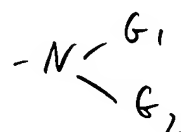
G1:CH3,NH2,H

G2:CH3,OH,MeO,[\*1],[\*2]

G3:CN,[\*3],[\*4]

Search for independent  
claims 2+3 where

Z is G3 + X II



Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom  
13:Atom 14:Atom 15:CLASS16:CLASS17:CLASS18:CLASS19:CLASS20:CLASS21:CLASS22:CLASS  
23:CLASS25:CLASS26:CLASS27:CLASS28:CLASS29:CLASS30:CLASS31:CLASS35:CLASS36:CLASS  
37:CLASS38:CLASS42:CLASS

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal600txm

PASSWORD:

\* \* \* \* \* RECONNECTED TO STN INTERNATIONAL \* \* \* \* \*  
SESSION RESUMED IN FILE 'REGISTRY' AT 15:05:48 ON 06 JUL 2006  
FILE 'REGISTRY' ENTERED AT 15:05:48 ON 06 JUL 2006  
COPYRIGHT (C) 2006 American Chemical Society (ACS)

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	334.76	766.46

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-8.25

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	334.76	766.46

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-8.25

FILE 'REGISTRY' ENTERED AT 15:05:56 ON 06 JUL 2006  
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STRUCTURE FILE UPDATES: 5 JUL 2006 HIGHEST RN 890705-10-9  
DICTIONARY FILE UPDATES: 5 JUL 2006 HIGHEST RN 890705-10-9

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TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and  
predicted properties as well as tags indicating availability of  
experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10530627d.str

L21 STRUCTURE UPLOADED

=> d 121

L21 HAS NO ANSWERS  
L21 STR

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

Structure attributes must be viewed using STN Express query preparation.

=> s l21 sss sam  
SAMPLE SEARCH INITIATED 15:06:20 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 712 TO ITERATE

100.0% PROCESSED 712 ITERATIONS 8 ANSWERS  
SEARCH TIME: 00.00.02

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 12640 TO 15840  
PROJECTED ANSWERS: 8 TO 329

L22 8 SEA SSS SAM L21

=> s l21 sss full  
FULL SEARCH INITIATED 15:06:31 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 14160 TO ITERATE

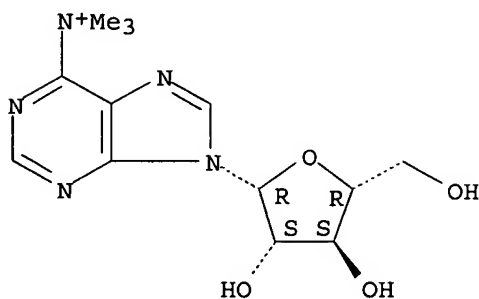
100.0% PROCESSED 14160 ITERATIONS 178 ANSWERS  
SEARCH TIME: 00.00.01

L23 178 SEA SSS FUL L21

=> d scan

L23 178 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN 9H-Purin-6-aminium, 9-β-D-arabinofuranosyl-N,N,N-trimethyl- (9CI)  
MF C13 H20 N5 O4  
CI COM

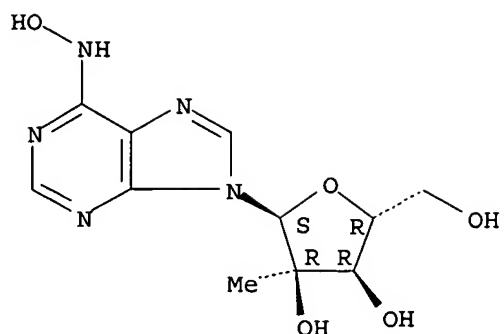
Absolute stereochemistry.



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):10

L23 178 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN 6H-Purin-6-one, 1,9-dihydro-9-(2-C-methyl-α-D-ribofuranosyl)-, oxime  
(9CI)  
MF C11 H15 N5 O5

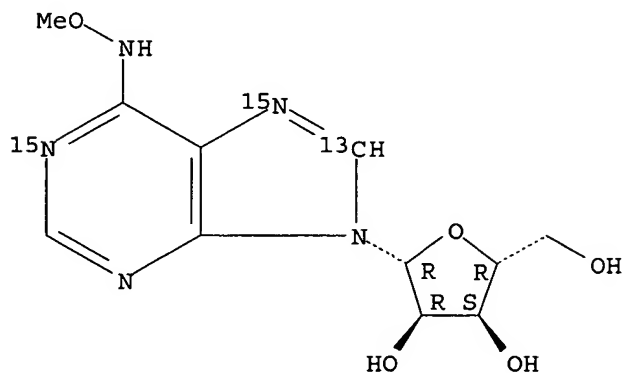
Absolute stereochemistry.



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

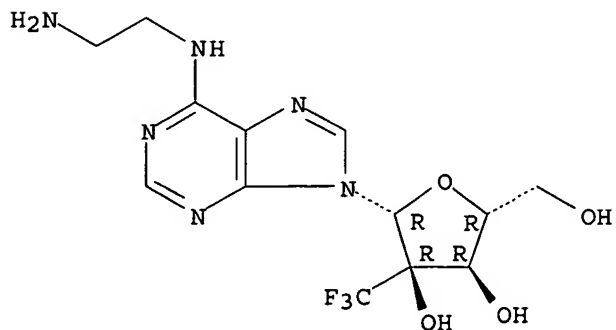
L23 178 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Inosine-8-13C-1,7-15N2, O-methyloxime (9CI)  
 MF C11 H15 N5 O5

Absolute stereochemistry.



L23 178 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Adenosine, N-(2-aminoethyl)-2'-C-(trifluoromethyl)- (9CI)  
 MF C13 H17 F3 N6 O4

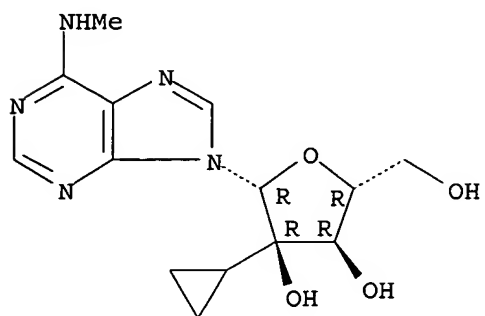
Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L23 178 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Adenosine, 2'-C-cyclopropyl-N-methyl- (9CI)  
MF C14 H19 N5 O4

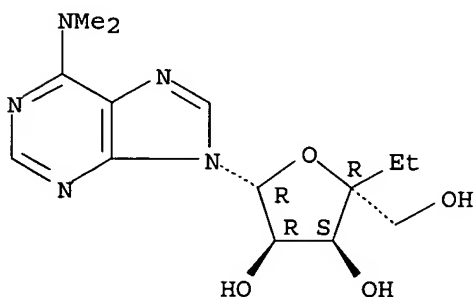
Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L23 178 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Adenosine, 4'-C-ethyl-N,N-dimethyl- (9CI)  
MF C14 H21 N5 O4

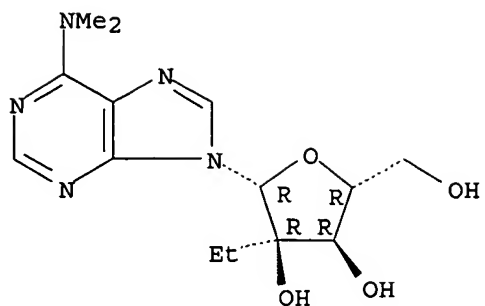
Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L23 178 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Adenosine, 2'-C-ethyl-N,N-dimethyl- (9CI)  
MF C14 H21 N5 O4

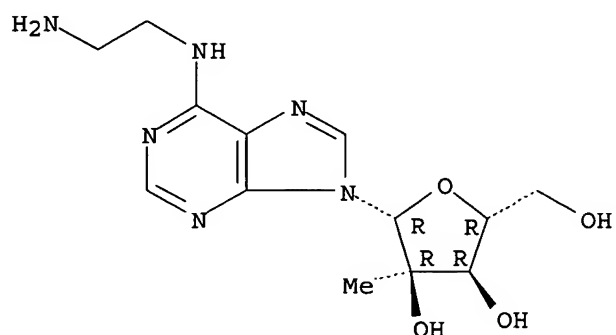
Absolute stereochemistry.



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

L23 178 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Adenosine, N-(2-aminoethyl)-2'-C-methyl- (9CI)  
 MF C13 H20 N6 O4

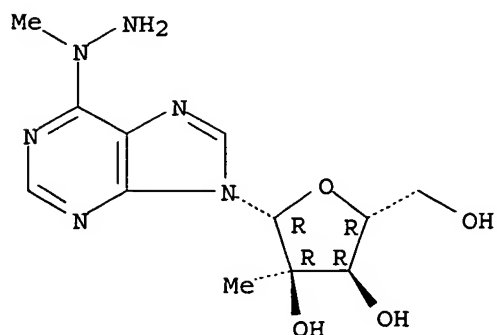
Absolute stereochemistry.



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

L23 178 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN 9H-Purine, 6-(1-methylhydrazino)-9-(2-C-methyl-beta-D-ribofuranosyl)-  
 (9CI)  
 MF C12 H18 N6 O4

Absolute stereochemistry.



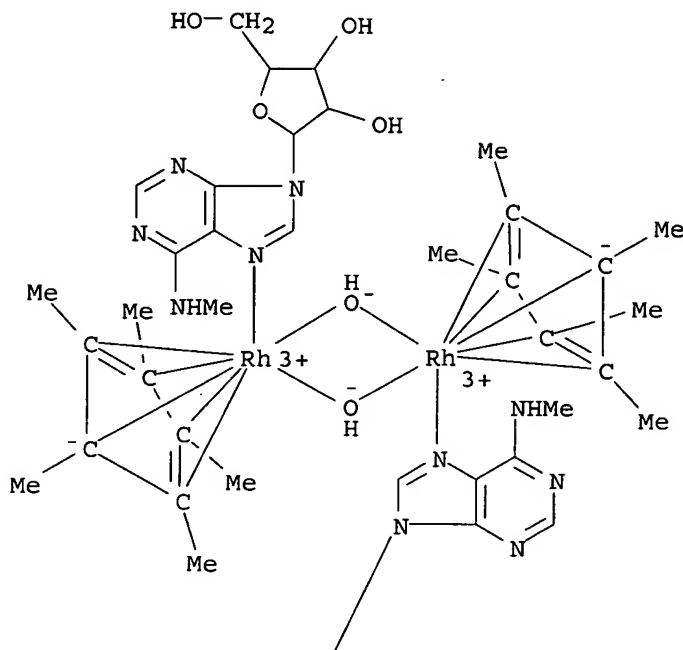
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L23 178 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
 IN Rhodium(2+), di- $\mu$ -hydroxybis(N-methyladenosine- $\kappa$ N7)bis[(1,2,3,4,5- $\eta$ )-1,2,3,4,5-pentamethyl-2,4-cyclopentadien-1-yl]di-, stereoisomer,  
 salt with trifluoromethanesulfonic acid (1:2), trihydrate (9CI)  
 MF C42 H62 N10 O10 Rh2 . C F3 O3 S . 3 H2 O

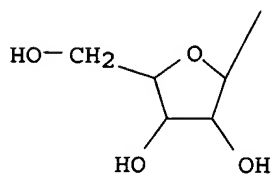
CM 1

CM 2

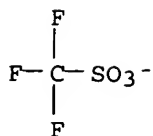
PAGE 1-A



PAGE 2-A

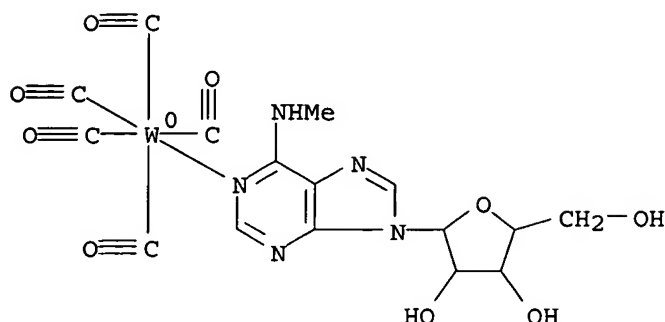


CM 3





L23 178 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN  
IN Tungsten, pentacarbonyl(N-methyladenosine-κN1)-, (OC-6-22) - (9CI)  
MF C16 H15 N5 O9 W  
CI CCS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	167.82	934.28
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-8.25

FILE 'CAPLUS' ENTERED AT 15:07:41 ON 06 JUL 2006  
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FILE COVERS 1907 - 6 Jul 2006 VOL 145 ISS 2  
FILE LAST UPDATED: 5 Jul 2006 (20060705/ED)

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<http://www.cas.org/infopolicy.html>

=> d his

(FILE 'HOME' ENTERED AT 13:50:33 ON 06 JUL 2006)

FILE 'REGISTRY' ENTERED AT 13:50:41 ON 06 JUL 2006

L1               STRUCTURE UPLOADED  
 L2               3 S L1 SSS SAM  
 L3               104 S L1 SSS FULL  
  
 L4               FILE 'CAPLUS' ENTERED AT 13:51:24 ON 06 JUL 2006  
                  55 S L3  
  
 L5               FILE 'REGISTRY' ENTERED AT 14:29:47 ON 06 JUL 2006  
                  STRUCTURE UPLOADED  
 L6               0 S L5 SSS SAM  
 L7               0 S L5 FULL  
  
 L8               FILE 'CAPLUS' ENTERED AT 14:30:42 ON 06 JUL 2006  
                  0 S 200362256.PN  
 L9               0 S 200362256/PN  
 L10              1 S WO 200362256/PN  
                  SEL RN  
  
 L11              FILE 'REGISTRY' ENTERED AT 14:33:21 ON 06 JUL 2006  
                  39 S E1-E39  
  
 FILE 'CAPLUS' ENTERED AT 14:36:34 ON 06 JUL 2006  
  
 FILE 'HCAPLUS' ENTERED AT 14:36:57 ON 06 JUL 2006  
  
 FILE 'REGISTRY' ENTERED AT 14:45:20 ON 06 JUL 2006  
                  E 1068-57-1/RN  
 L12              1 S E3  
 L13              1 S 565435-03-2/RN  
 L14              1 S 565435-04-3/RN  
  
 L15              FILE 'CAPLUS' ENTERED AT 14:48:03 ON 06 JUL 2006  
                  2 S L13 OR L14  
  
 L16              FILE 'REGISTRY' ENTERED AT 14:53:10 ON 06 JUL 2006  
                  STRUCTURE UPLOADED  
 L17              0 S L16 SSS SAM  
 L18              0 S L16 FULL  
 L19              STRUCTURE UPLOADED  
 L20              0 S L19 FULL  
  
 L21              FILE 'REGISTRY' ENTERED AT 15:05:56 ON 06 JUL 2006  
                  STRUCTURE UPLOADED  
 L22              8 S L21 SSS SAM  
 L23              178 S L21 SSS FULL

FILE 'CAPLUS' ENTERED AT 15:07:41 ON 06 JUL 2006

=> s l23

L24              888 L23

=> file reg

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	2.30	936.58
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-8.25

FILE 'REGISTRY' ENTERED AT 15:10:35 ON 06 JUL 2006  
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STRUCTURE FILE UPDATES: 5 JUL 2006 HIGHEST RN 890705-10-9  
DICTIONARY FILE UPDATES: 5 JUL 2006 HIGHEST RN 890705-10-9

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<http://www.cas.org/ONLINE/UG/regprops.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10530627e.str

L25 STRUCTURE UPLOADED

=> s l25 sss sam

SAMPLE SEARCH INITIATED 15:10:59 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 26 TO ITERATE

100.0% PROCESSED 26 ITERATIONS 0 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 215 TO 825

PROJECTED ANSWERS: 0 TO 0

L26 0 SEA SSS SAM L25

=> s l25 full

FULL SEARCH INITIATED 15:11:03 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 443 TO ITERATE

100.0% PROCESSED 443 ITERATIONS 24 ANSWERS  
SEARCH TIME: 00.00.01

L27 24 SEA SSS FUL L25

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	166.94	1103.52

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-8.25

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FILE COVERS 1907 - 6 Jul 2006 VOL 145 ISS 2  
FILE LAST UPDATED: 5 Jul 2006 (20060705/ED)

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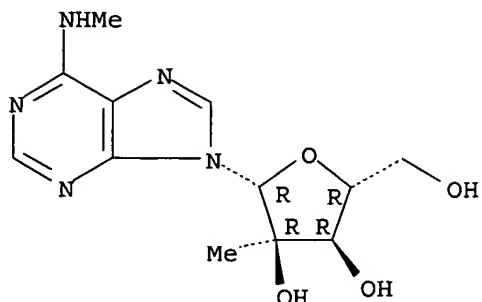
=> s l27

L28 11 L27

=> d bib abs hitstr 1-11 l28

L28 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 2005:559568 CAPLUS  
DN 143:230125  
TI Antitumor Activity of C-Methyl- $\beta$ -D-ribofuranosyladenine Nucleoside Ribonucleotide Reductase Inhibitors  
AU Franchetti, Palmalisa; Cappellacci, Loredana; Pasqualini, Michela; Petrelli, Riccardo; Vita, Patrizia; Jayaram, Hiremagalur N.; Horvath, Zsuzsanna; Szekeres, Thomas; Grifantini, Mario  
CS Dipartimento di Scienze Chimiche, Universita di Camerino, Camerino, 62032, Italy  
SO Journal of Medicinal Chemistry (2005), 48(15), 4983-4989  
CODEN: JMCMAR; ISSN: 0022-2623  
PB American Chemical Society  
DT Journal  
LA English  
OS CASREACT 143:230125  
AB A series of adenosine derivs. substituted at the 1'-, 2'-, or 3'-position of the ribose ring with a Me group was synthesized and evaluated for antitumor activity. From this study 3'-C-methyladenosine (3'-Me-Ado) emerged as the most active compound, showing activity against human myelogenous leukemia K562, multidrug resistant human leukemia K562IU, human promyelocytic leukemia HL-60, human colon carcinoma HT-29, and human breast carcinoma MCF-7 cell lines with IC50 values ranging from 11 to 38  $\mu$ M. Structure-activity relationship studies showed that the structure of 3'-Me-Ado is crucial for the activity. Substitution of a hydrogen atom of the N6-amino group with a small alkyl or cycloalkyl group, the introduction of a chlorine atom in the 2-position of the purine ring, or the moving of the Me group from the 3'-position to other ribose positions brought about a decrease or loss of antitumor activity. The antiproliferative activity of 3'-Me-Ado appears to be related to its ability to deplete both intracellular purine and pyrimidine deoxynucleotides through ribonucleotide reductase inhibition.  
IT 565450-76-2P  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
(preparation, structure-activity, and antitumor activity of C-methyl- $\beta$ -D-ribofuranosyladenine nucleoside ribonucleotide reductase inhibitors)  
RN 565450-76-2 CAPLUS  
CN Adenosine, N-methyl-2'-C-methyl- (9CI) (CA INDEX NAME)

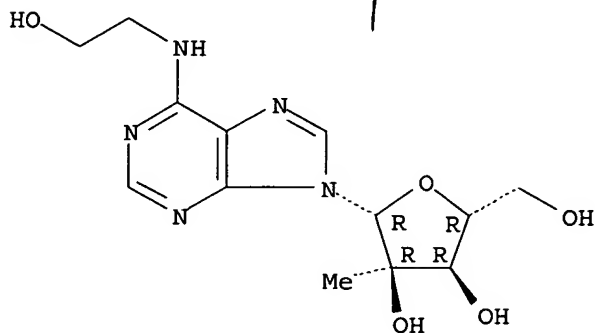
Absolute stereochemistry.



RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

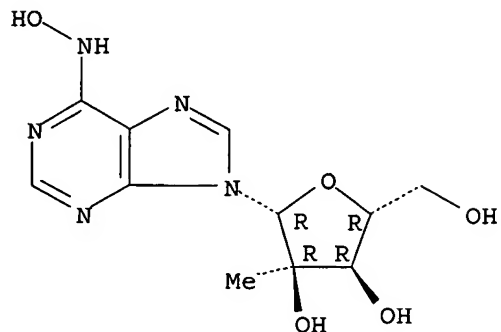
L28 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 2005:74688 CAPLUS  
DN 142:336573  
TI Synthesis of 9-(2- $\beta$ -C-methyl- $\beta$ -D-ribofuranosyl)-6-substituted  
purine derivatives as inhibitors of HCV RNA replication  
AU Ding, Yili; Girardet, Jean-Luc; Hong, Zhi; Lai, Vicky C. H.; An, Haoyun;  
Koh, Yung-hyo; Shaw, Stephanie Z.; Zhong, Weidong  
CS Valeant Pharmaceuticals International, Costa Mesa, CA, 92626, USA  
SO Bioorganic & Medicinal Chemistry Letters (2005), 15(3), 709-713  
CODEN: BMCLE8; ISSN: 0960-894X  
PB Elsevier B.V.  
DT Journal  
LA English  
AB A series of 9-(2'- $\beta$ -C-methyl- $\beta$ -D-ribofuranosyl)-6-substituted  
purine derivs. were synthesized as potential inhibitors of HCV RNA  
replication. Their inhibitory activities in a cell based HCV replicon  
assay were reported. A prodrug approach was used to further improve the  
potency of these compds. by increasing the intracellular levels of  
5'-monophosphate metabolites. These nucleotide prodrugs showed much  
improved inhibitory activities of HCV RNA replication.  
IT 565435-08-7P 565435-18-9P 565435-19-0P  
565435-22-5P 565435-24-7P 565450-76-2P  
565450-77-3P 728022-80-8P  
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation);  
BIOL (Biological study); PREP (Preparation)  
(synthesis of 9-(2- $\beta$ -C-methyl- $\beta$ -D-ribofuranosyl)-6-  
substituted purine derivs. as inhibitors of HCV RNA replication)  
RN 565435-08-7 CAPLUS  
CN Adenosine, N-(2-hydroxyethyl)-2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



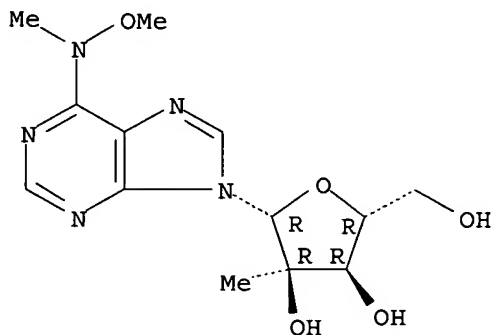
RN 565435-18-9 CAPLUS  
CN Inosine, 2'-C-methyl-, oxime (9CI) (CA INDEX NAME)

Absolute stereochemistry.



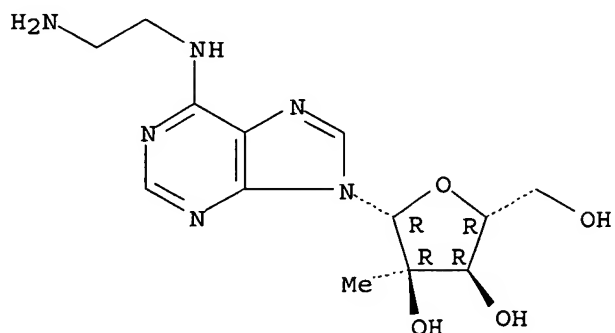
RN 565435-19-0 CAPLUS  
CN Adenosine, N-methoxy-N-methyl-2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



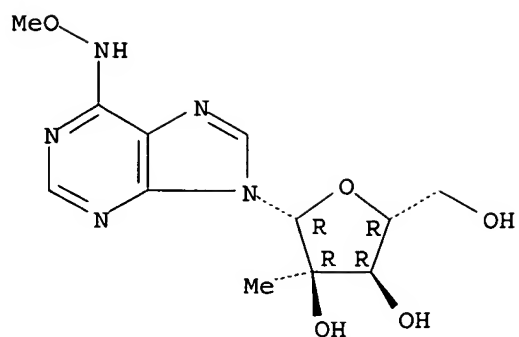
RN 565435-22-5 CAPLUS  
CN Adenosine, N-(2-aminoethyl)-2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 565435-24-7 CAPLUS  
CN Inosine, 2'-C-methyl-, O-methyloxime (9CI) (CA INDEX NAME)

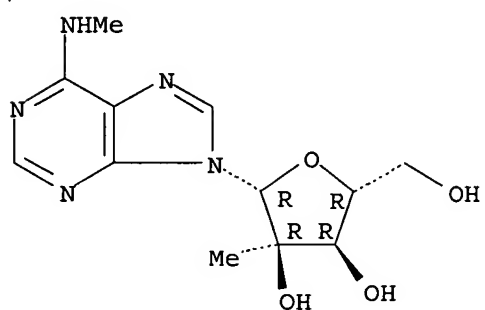
Absolute stereochemistry.



RN 565450-76-2 CAPLUS

CN Adenosine, N-methyl-2'-C-methyl- (9CI) (CA INDEX NAME)

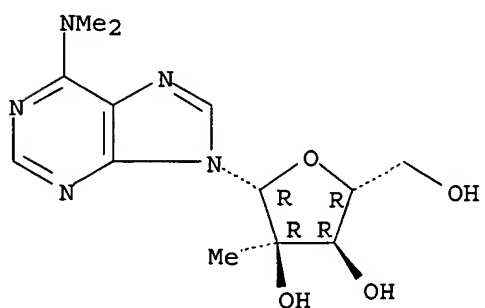
Absolute stereochemistry.



RN 565450-77-3 CAPLUS

CN Adenosine, N,N-dimethyl-2'-C-methyl- (9CI) (CA INDEX NAME)

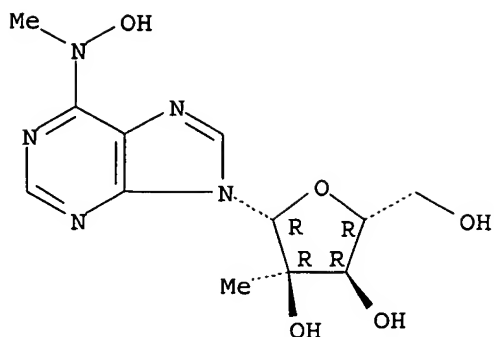
Absolute stereochemistry.



RN 728022-80-8 CAPLUS

CN Adenosine, N-hydroxy-N-methyl-2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



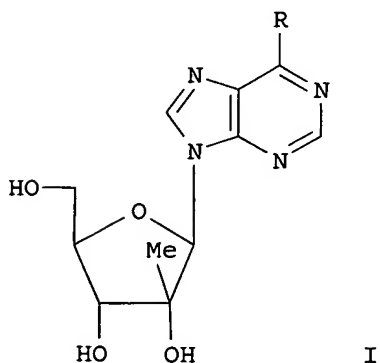
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 2004:633938 CAPLUS  
DN 141:157387  
TI Synthesis and use of 2'-substituted-N6-modified nucleosides as antiviral agents  
IN An, Haoyun; Ramasamy, Kanda; Shaw, Stephanie  
PA Ribapharm Inc., USA  
SO PCT Int. Appl., 25 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

*Bad date*

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004065398	A2	20040805	WO 2004-US1125	20040115
	WO 2004065398	A3	20050303		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI				
	US 2006135465	A1	20060622	US 2006-542235	20060123
PRAI	US 2003-440666P	P	20030115		
	WO 2004-US1125	W	20040115		
OS	CASREACT 141:157387; MARPAT 141:157387				
GI					

*Do ODP*



AB An improved method of preparing a sugar modified nucleoside analog I, wherein R is selected from the group consisting of NH<sub>2</sub>NH<sub>2</sub>, N(CH<sub>3</sub>)NH<sub>2</sub>, N(CH<sub>2</sub>CH<sub>3</sub>)NH<sub>2</sub>, N(CH<sub>3</sub>)OH, NHOH, NHOCH<sub>3</sub>, NHOCH<sub>2</sub>CH<sub>3</sub>, NHN(CH<sub>3</sub>)<sub>2</sub>, N(CH<sub>3</sub>)NHCH<sub>3</sub>, NHNHCH<sub>3</sub>, NHNHOCH<sub>3</sub>, and NHNHCOOCH<sub>3</sub>, includes a protocol in which a hydroxy



group of a sugar is selectively deprotected and oxidized prior to nucleophilic modification of the corresponding carbonyl group. The modified sugar is then coupled to a heterocyclic base that is modified with a dual nucleophilic reagent in a further step that provides N6-modified adenosine analogs with high stereoselectivity. Contemplated antiviral and immunomodulatory activities of title nucleosides are reported (no data). Thus, I [R = N(Me)NH<sub>2</sub>] was prepared from 2-iodo-benzoic acid via stereoselective glycosylation with 6-chloropurine.

IT 565435-14-5P 565435-18-9P 565435-24-7P

728022-80-8P

RL: BSU (Biological study, unclassified); SPN (Synthetic preparation);

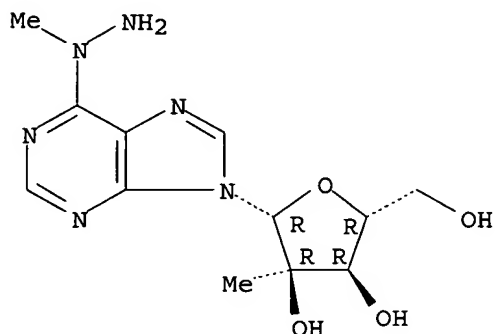
BIOL (Biological study); PREP (Preparation)

(synthesis and use of 2'-substituted-N6-modified nucleosides as antiviral agents via stereoselective glycosylation)

RN 565435-14-5 CAPLUS

CN 9H-Purine, 6-(1-methylhydrazino)-9-(2-C-methyl-β-D-ribofuranosyl) - (9CI) (CA INDEX NAME)

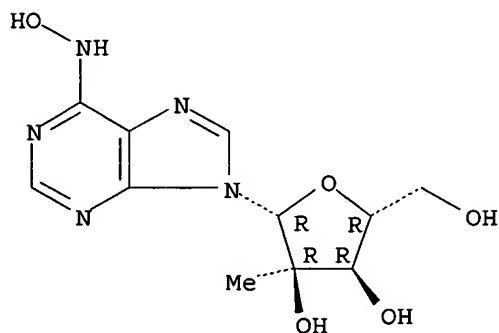
Absolute stereochemistry.



RN 565435-18-9 CAPLUS

CN Inosine, 2'-C-methyl-, oxime (9CI) (CA INDEX NAME)

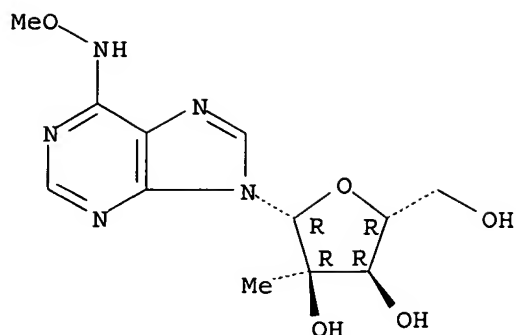
Absolute stereochemistry.



RN 565435-24-7 CAPLUS

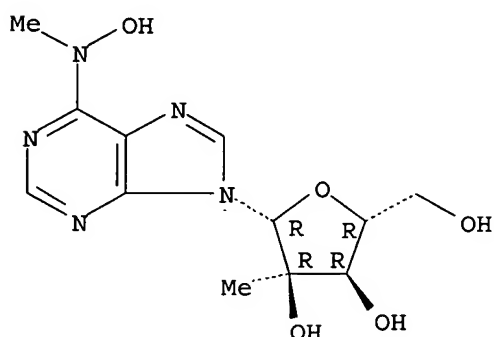
CN Inosine, 2'-C-methyl-, O-methyloxime (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 728022-80-8 CAPLUS  
 CN Adenosine, N-hydroxy-N-methyl-2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

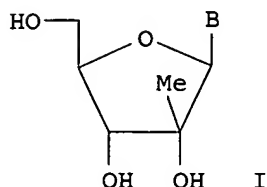


L28 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2004:566635 CAPLUS  
 DN 141:89323  
 TI Process for the production of 3'-nucleoside prodrugs  
 IN Storer, Richard; Moussa, Adel; Mathieu, Steven; Qu, Lin  
 PA Idenix Cayman Limited, Cayman I.  
 SO PCT Int. Appl., 57 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004058792	A1	20040715	WO 2003-US41603	20031223
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RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2511616	AA	20040715	CA 2003-2511616	20031223
AU 2003300434	A1	20040722	AU 2003-300434	20031223
US 2004181051	A1	20040916	US 2003-746395	20031223
EP 1575971	A1	20050921	EP 2003-814400	20031223
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

BR 2003016868	A	20051025	BR 2003-16868	20031223
CN 1751058	A	20060322	CN 2003-80109820	20031223
JP 2006514038	T2	20060427	JP 2004-562599	20031223
NO 2005003557	A	20050908	NO 2005-3557	20050720
PRAI US 2002-436150P	P	20021223		
WO 2003-US41603	W	20031223		
OS CASREACT 141:89323; MARPAT 141:89323				
GI				



AB Provided is a single-step process for the regioselective 3'-acylation of a ribofuranosyl 2'- or 3'-branched nucleosides I, wherein B is nucleobase. These compds. are useful as antiviral agents, and in particular, can be used to treat Flaviviridae infections in a host in need thereof (no data). Thus, 9-(2'-C-methyl-3'-O-valinoyl- $\beta$ -D-ribofuranosyl)-6-N-methyladenine dihydrochloride was prepared via regioselective esterification of 9-(2'-C-methyl- $\beta$ -D-ribofuranosyl)-6-N-methyladenine with N-(tert-butoxycarbonyl)-L-valine.

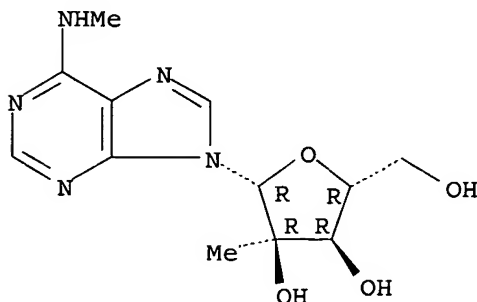
IT 565450-76-2

RL: RCT (Reactant); RACT (Reactant or reagent)  
(process for production of nucleoside prodrugs via regioselective esterification)

RN 565450-76-2 CAPLUS

CN Adenosine, N-methyl-2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L28 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:453348 CAPLUS

DN 141:17578

TI Treatment of Flaviviridae infection with 2'-branched nucleosides and another mutation-inducing drug such as interferon

IN Sommadossi, Jean-Pierre; La Colla, Paolo; Standring, David; Bichko, Vadim; Qu, Lin

PA Idenix (Cayman) Limited, Cayman I.; Universita Degli Studi Di Cagliari

SO PCT Int. Appl., 166 pp.

CODEN: PIXXD2

DT Patent

LA English  
FAN.CNT 1

*Paul Dark*

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004046331	A2	20040603	WO 2003-US36714	20031117
	WO 2004046331	A3	20060302		
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	RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
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	AU 2003298658	A1	20040615	AU 2003-298658	20031117
	US 2005031588	A1	20050210	US 2003-715729	20031117
	EP 1576138	A2	20050921	EP 2003-796412	20031117
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
	BR 2003016363	A	20051004	BR 2003-16363	20031117
	NO 2005002920	A	20050815	NO 2005-2920	20050615
PRAI	US 2002-426675P	P	20021115		
	WO 2003-US36714	W	20031117		

OS MARPAT 141:17578

AB The present invention discloses a method for the treatment of Flaviviridae infection that includes the administration of a 2'-branched nucleoside, or a pharmaceutically acceptable prodrug and/or salt thereof, to a human in need of therapy in combination or alternation with a drug that directly or indirectly induces a mutation in the viral genome at a location other than a mutation of a nucleotide that results in a change from serine to a different amino acid in the highly conserved consensus sequence,  $\text{XRX}\langle\text{u}\rangle\text{S}\langle\text{u}\rangle\text{GX}\text{X}\text{XT}$ , of domain B of the RNA polymerase region, or is associated with such a mutation. The invention also includes a method to detect a mutant strain of Flaviviridae and a method for its treatment. Thus, in bovine viral diarrhea virus (BVDV)-infected MDBK cells treated with  $\beta$ -D-2'-methylcytidine, viruses resistant to the nucleoside appeared. The drug resistance was associated with a mutation in the NS5B gene which resulted in an S405T substitution in the encoded RNA-dependent RNA polymerase. These mutant viruses were sensitive to Intron A (interferon  $\alpha$ -2b). Intron A and  $\beta$ -D-2'-methylcytidine exhibited synergistic inhibitory activity on BVDV growth in MDBK cells.

IT 565450-76-2

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

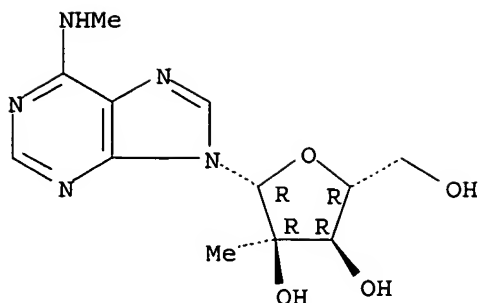
(treatment of Flaviviridae infection with 2'-branched nucleosides and another mutation-inducing drug such as interferon)

RN 565450-76-2 CAPLUS

CN Adenosine, N-methyl-2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

1



L28 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2004:290484 CAPLUS  
 DN 140:327061  
 TI Nucleoside derivatives for treating hepatitis C virus infection  
 IN Roberts, Christopher Don; Dyatkina, Natalia B.  
 PA Genelabs Technologies, Inc., USA  
 SO PCT Int. Appl., 119 pp.  
 CODEN: PIXXD2

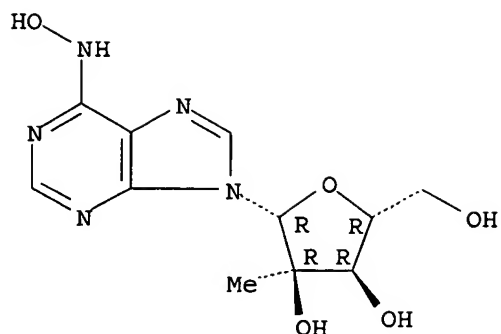
DT Patent  
 LA English

FAN.CNT 2

*Bad  
date*

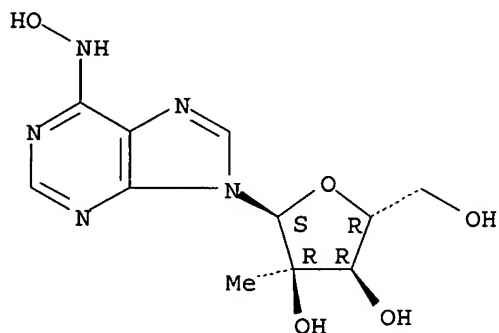
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PI	WO 2004028481	A2	20040408	WO 2003-US31433	20030930
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2499253	AA	20040408	CA 2003-2499253	20030930
	AU 2003279797	A1	20040419	AU 2003-279797	20030930
	EP 1572097	A2	20050914	EP 2003-773127	20030930
	EP 1572097	A3	20051207		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2006505537	T2	20060216	JP 2004-540353	20030930
	NO 2005001969	A	20050524	NO 2005-1969	20050422
PRAI	US 2002-415222P	P	20020930		
	US 2003-443169P	P	20030129		
	WO 2003-US31433	W	20030930		
OS	MARPAT 140:327061				
AB	Nucleoside compns. and methods for treating hepatitis C virus infections. Thus, 9-(2'-C-methyl-β-D-ribofuranosyl)-6-methoxyaminopurine was prepared by the reaction of 6-chloro-9-(2'-C-methyl-β-D-ribofuranosyl)purine and methoxylamine. This compound exhibited anti-hepatitis C activity by inhibiting HCV polymerase.				
IT	565435-18-9P 677298-62-3P RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (nucleoside derivs. for treating hepatitis C virus infection)				
RN	565435-18-9 CAPLUS				
CN	Inosine, 2'-C-methyl-, oxime (9CI) (CA INDEX NAME)				

Absolute stereochemistry.



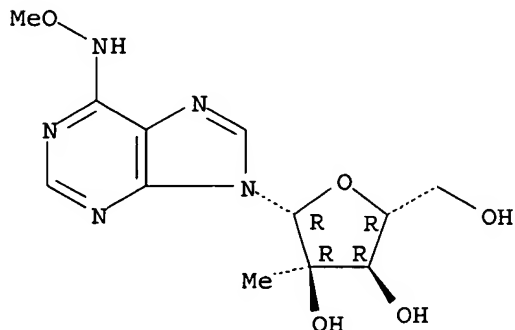
RN 677298-62-3 CAPLUS  
 CN 6H-Purin-6-one, 1,9-dihydro-9-(2-C-methyl-α-D-ribofuranosyl)-, oxime  
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 565435-24-7P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)  
 (nucleoside derivs. for treating hepatitis C virus infection)  
 RN 565435-24-7 CAPLUS  
 CN Inosine, 2'-C-methyl-, O-methyloxime (9CI) (CA INDEX NAME)

Absolute stereochemistry.

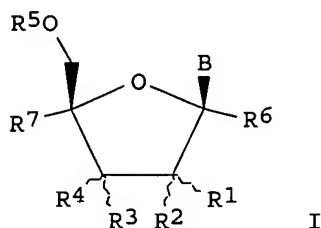


L28 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2004:2898 CAPLUS  
 DN 140:42424  
 TI Preparation of nucleoside derivatives as inhibitors of RNA-dependent RNA

viral polymerase  
 IN Carroll, Steven S.; Olsen, David B.; Durette, Philippe L.; Bhat,  
 Balkrishen; Dande, Prasad; Eldrup, Anne B.  
 PA Merck & Co., Inc., USA; Isis Pharmaceuticals, Inc.  
 SO PCT Int. Appl., 43 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004000858	A2	20031231	WO 2003-US19172	20030617
	WO 2004000858	A3	20050512		
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	GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS,				
	LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG,				
	PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,				
	TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW:				
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	CA 2488534	AA	20031231	CA 2003-2488534	20030617
	AU 2003269890	A1	20040106	AU 2003-269890	20030617
	EP 1551421	A2	20050713	EP 2003-751777	20030617
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	JP 2005530843	T2	20051013	JP 2004-515870	20030617
PRAI	US 2002-390579P	P	20020621		
	WO 2003-US19172	W	20030617		
OS	MARPAT 140:42424				
GI					

*bad date*



AB The present invention provides nucleoside compds. I, wherein B is nucleobase; R1 is fluoromethyl, difluoromethyl, trifluoromethyl; R2 is H, F, amino, OH, SH, alkoxy, alkylcarbonyloxy, alkyl; R3 and R4 are independently H, Cn, N3, halogen, OH, SH, amino, alkoxy, alkylcarbonyloxy, alkenyl, alkynyl; R5 is H, alkylcarbonyl, P3O9H4, P2O6H3, phosphophonyl; R6 and R7 independently H, Me, hydroxymethyl, fluoromethyl; and certain derivs. thereof which are inhibitors of RNA-dependent RNA viral polymerase. These compds. are inhibitors of RNA-dependent RNA viral replication and are useful for the treatment of RNA-dependent RNA viral infection. They are particularly useful as inhibitors of hepatitis C virus (HCV) NS5B polymerase, as inhibitors of HCV replication, and/or for the treatment of hepatitis C infection. The invention also describes pharmaceutical compns. containing such nucleoside compds. alone or in combination with other agents active against RNA-dependent RNA viral infection, in particular HCV infection. Also disclosed are methods of inhibiting RNA-dependent RNA polymerase, inhibiting RNA-dependent RNA

viral replication, and/or treating RNA-dependent RNA viral infection with the nucleoside compds. of the present invention. Thus, 2-amino-9-(2-C-fluoromethyl-β-D-ribofuranosyl)-3,9-dihydropurin-6-one was prepared and tested as inhibitor of RNA-dependent RNA viral polymerase. Title compds. tested in the HCV NS5B polymerase assay exhibited IC50's less than 100 μmol.

IT 636581-90-3P

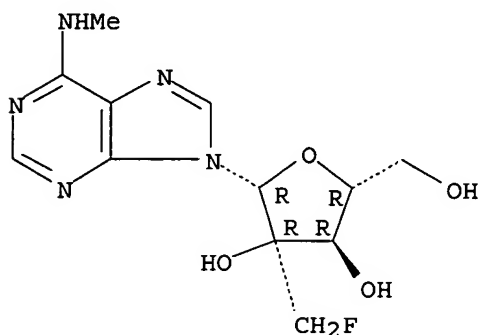
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase)

RN 636581-90-3 CAPLUS

CN Adenosine, 2'-C-(fluoromethyl)-N-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L28 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:892793 CAPLUS

DN 139:365176

TI Preparation of nucleoside derivatives for treating hepatitis C virus infection

IN Roberts, Christopher Don; Dyatkina, Natalia B.; Keicher, Jesse D.; Liehr, Sebastian Johannes Reinhard; Hanson, Eric Jason

PA Genelabs Technologies, Inc., USA

SO PCT Int. Appl., 182 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

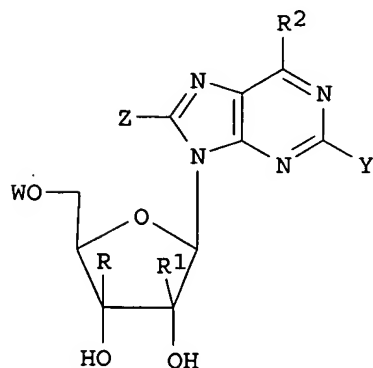
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PI	WO 2003093290	A2	20031113	WO 2003-US14237	20030506
	WO 2003093290	A3	20040318		
	WO 2003093290	C1	20050519		
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	CA 2484921	AA	20031113	CA 2003-2484921	20030506
	AU <del>2003232071</del>	A1	20031117	AU 2003-232071	20030506
	US 2004063658	A1	20040401	US 2003-431631	20030506
	EP 1501850	A2	20050202	EP 2003-747674	20030506

Citing on IDS bind date

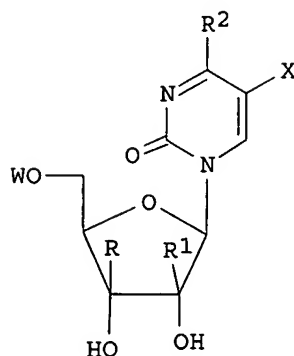


R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

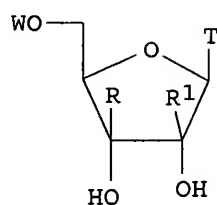
BR 2003009581	A	20050329	BR 2003-9581	20030506
CN 1653077	A	20050810	CN 2003-810239	20030506
JP 2005530759	T2	20051013	JP 2004-501429	20030506
NO 2004005247	A	20041130	NO 2004-5247	20041130
PRAI US 2002-378624P	P	20020506		
US 2002-392871P	P	20020628		
WO 2003-US14237	W	20030506		
OS MARPAT 139:365176				
GI				



I



II



III

AB Nucleosides I-III, wherein R and R1 are independently H, alkyl, alkenyl, alkynyl, provided that R and R1 are not both H; R2 is alkyl, cycloalkyl, alkenyl, alkynyl, acylamino, guanidino, amidino, thioacylamino, OH, alkoxy, halo, nitro, aryl, heteroaryl, substituted amine; W is H, phosphate, phosphonate, acyl, alkyl, sulfonate, lipid, amino acid, sugar residue, peptide, cholesterol; X is H, halo, alkyl, substituted amine; Y is H, halo, OH, alkylthio, substituted amine; Z is H, halo, OH, alkyl, substituted amine; T is nucleobase, were prepared as HCV RNA polymerase inhibitors and for treating hepatitis C virus infections. Thus, 2-(4-amino-pyrrolo[3,2-c]pyridin-1-yl)-5-hydroxymethyl-3-methyltetrahydrofuran-3,4-diol was prepared for treating hepatitis C virus infections (no data). Different kind of formulation such as tablet, capsule, suspension, injectable, and suppository formulation are reported.

IT 565435-18-9P 565435-22-5P 565435-24-7P  
622380-55-6P 622380-68-1P 622380-73-8P  
622380-77-2P

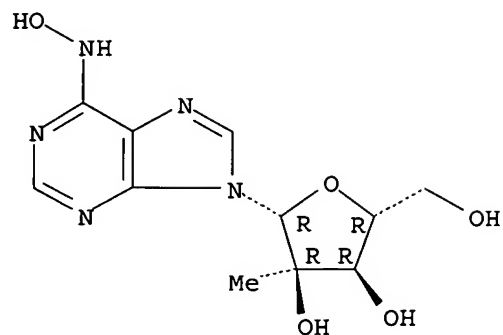
RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of nucleoside derivs. for treating hepatitis C virus infection)

RN 565435-18-9 CAPLUS

CN Inosine, 2'-C-methyl-, oxime (9CI) (CA INDEX NAME)

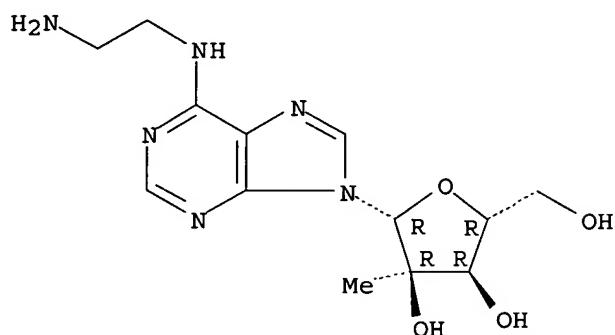
Absolute stereochemistry.



RN 565435-22-5 CAPLUS

CN Adenosine, N-(2-aminoethyl)-2'-C-methyl- (9CI) (CA INDEX NAME)

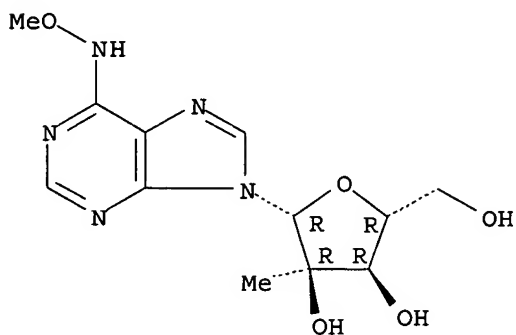
Absolute stereochemistry.



RN 565435-24-7 CAPLUS

CN Inosine, 2'-C-methyl-, O-methyloxime (9CI) (CA INDEX NAME)

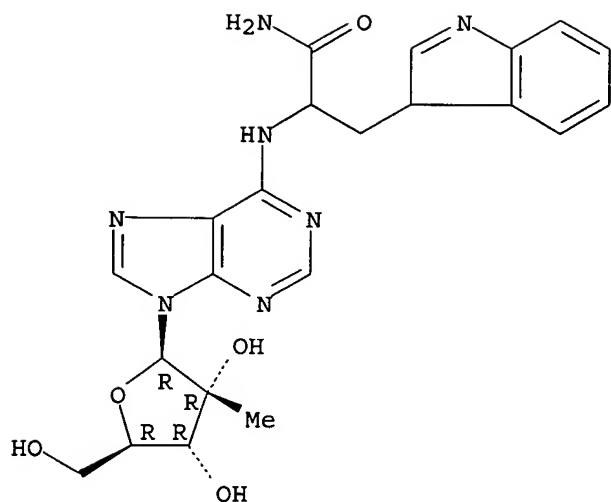
Absolute stereochemistry.



RN 622380-55-6 CAPLUS

CN Adenosine, N-[2-amino-1-(3H-indol-3-ylmethyl)-2-oxoethyl]-2'-C-methyl- (9CI) (CA INDEX NAME)

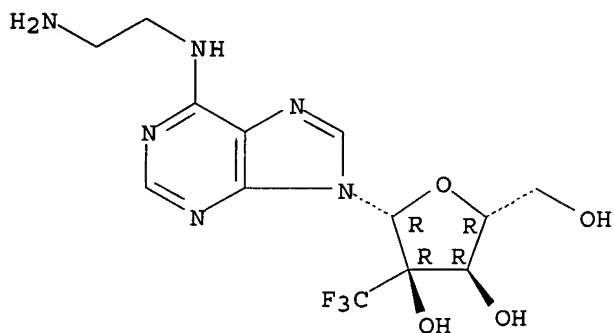
Absolute stereochemistry.



RN 622380-68-1 CAPLUS

CN Adenosine, N-(2-aminoethyl)-2'-C-(trifluoromethyl)- (9CI) (CA INDEX NAME)

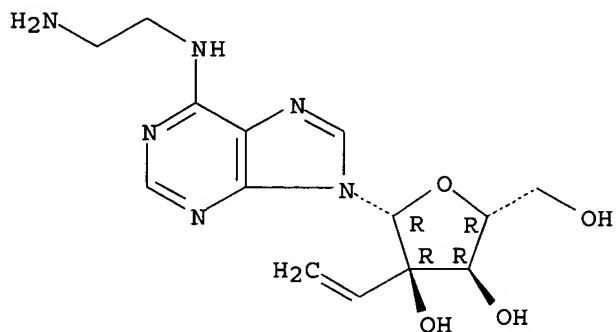
Absolute stereochemistry.



RN 622380-73-8 CAPLUS

CN Adenosine, N-(2-aminoethyl)-2'-C-ethenyl- (9CI) (CA INDEX NAME)

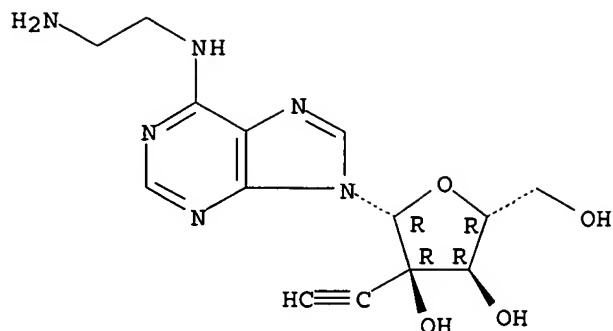
Absolute stereochemistry.



RN 622380-77-2 CAPLUS

CN Adenosine, N-(2-aminoethyl)-2'-C-ethynyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L28 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:591196 CAPLUS

DN 139:133790

TI Preparation of 2'-β-modified-6-substituted adenosine analogs and their use as antiviral agents

IN An, Haoyun; Ding, Yili; Shaw, Stephanie; Hong, Zhi

PA Ribapharm Inc., USA

SO PCT Int. Appl., 45 pp.

CODEN: PIXXD2

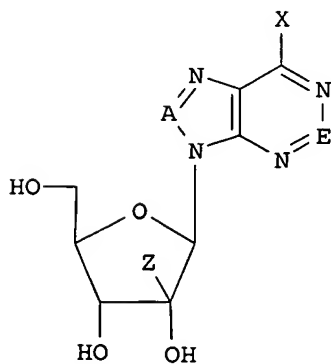
DT Patent

LA English

FAN.CNT 4

*mm*

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003062256	A1	20030731	WO 2002-US34026	20021023
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	RW:				
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PRAI	US 2002-350296P	P	20020117		
OS	MARPAT 139:133790				
GI					



I

AB Various 2'-beta-methyl-6-substituted adenosine analogs I in which Z is

selected from the group consisting of an alkyl, an O-alkyl, an alkenyl, an alkynyl, and CN, wherein the alkyl, the alkenyl, or the alkynyl is optionally substituted with a halogen or OH; A is CH or N, and E is C-R6 or N, such that (1) when A is CH then E is C-R6 or N, and (2) when A is N then E is CH; X is NR1R2, NR2NR3R4, NR2N=NR3, NR2N=CHR3, NR2N=O, NR2C(=O)NR3R4, NR2C(=S)NR3R4, NR2C(=NH)NR3R4, NR1C(=O)NR2NR3R4, NR2OR3, ONHC(O)O-alkyl, ONHC(O)O-aryl, ONR3R4, SNR1R2, SONR1R2, or S(O)2NR1R2; wherein R1-R4 are independently H, alkyl, substituted alkyl, O-alkyl, cyclic alkyl, heterocyclic alkyl, alkoxy, alkaryl, aryl, heterocyclic aryl, substituted aryl, acyl, substituted acyl, S(O)2-alkyl, NO, NH2, or OH; and R6 is H, NH2, halogen, N3, NHR1, NHCOR1 NR1R2, NHSO2R1, NHCONHR1, NHCSNHR1, CH2NHR1, CHR1NHR2, NHR1, NHNH2, CN, alkyl, alkenyl, alkynyl, CH2-aryl, CH2-heterocycle, halogen, OH, or SH; are prepared by conventional and combinatorial library approaches. Contemplated compds. are particularly useful as therapeutic agents, and especially as antiviral agents. Thus, N6-[3-(methylthio)phenyl]-9H-(2'-β-C-methyl-β-D-ribofuranosyl)adenine was prepared and tested in vitro as antiviral agent against influenza virus A, bovine viral diarrhea virus, Hepatitis B virus, HIV-1 virus and human Rhinovirus.

IT 565435-08-7P 565435-12-3P 565435-14-5P

565435-18-9P 565435-19-0P 565435-22-5P

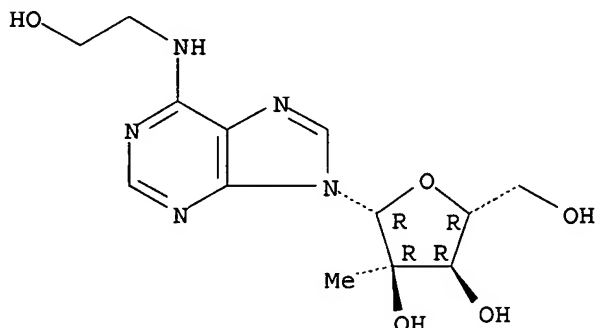
RL: CPN (Combinatorial preparation); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); CMBI (Combinatorial study); PREP (Preparation); USES (Uses)

(preparation of 2'-β-modified-6-substituted adenosine analogs and their use as antiviral agents)

RN 565435-08-7 CAPLUS

CN Adenosine, N-(2-hydroxyethyl)-2'-C-methyl- (9CI) (CA INDEX NAME)

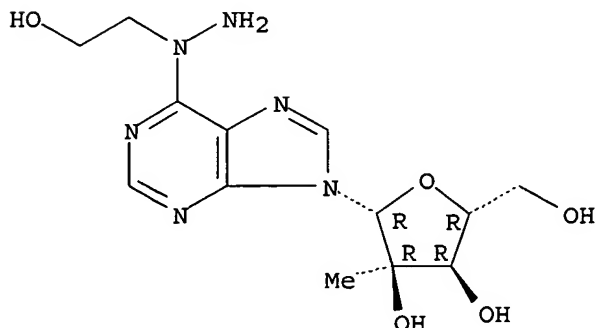
Absolute stereochemistry.



RN 565435-12-3 CAPLUS

CN Ethanol, 2-[1-[9-(2-C-methyl-β-D-ribofuranosyl)-9H-purin-6-yl]hydrazino]- (9CI) (CA INDEX NAME)

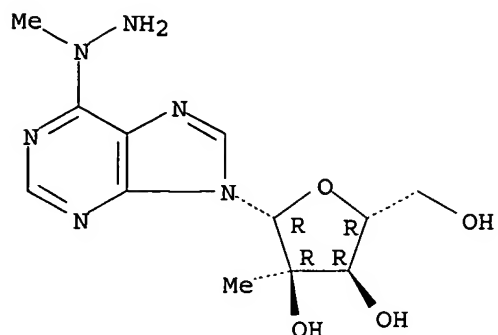
Absolute stereochemistry.



RN 565435-14-5 CAPLUS

CN 9H-Purine, 6-(1-methylhydrazino)-9-(2-C-methyl- $\beta$ -D-ribofuranosyl)-  
(9CI) (CA INDEX NAME)

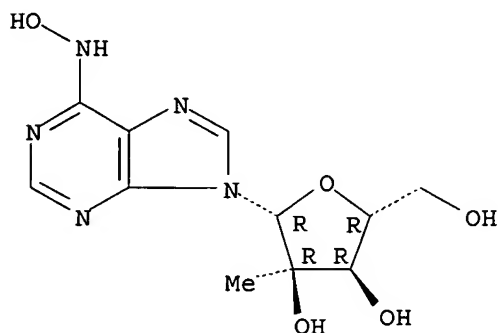
Absolute stereochemistry.



RN 565435-18-9 CAPLUS

CN Inosine, 2'-C-methyl-, oxime (9CI) (CA INDEX NAME)

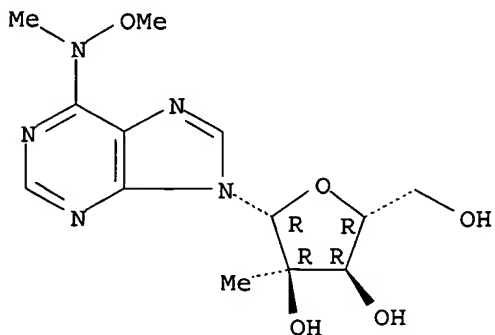
Absolute stereochemistry.



RN 565435-19-0 CAPLUS

CN Adenosine, N-methoxy-N-methyl-2'-C-methyl- (9CI) (CA INDEX NAME)

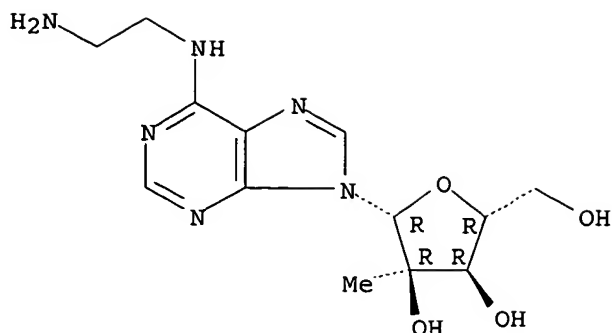
Absolute stereochemistry.



RN 565435-22-5 CAPLUS

CN Adenosine, N-(2-aminoethyl)-2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 565435-24-7

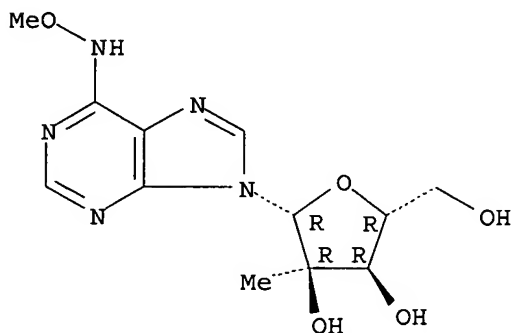
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of 2'- $\beta$ -modified-6-substituted adenosine analogs and their use as antiviral agents)

RN 565435-24-7 CAPLUS

CN Inosine, 2'-C-methyl-, O-methyloxime (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:591195 CAPLUS

DN 139:133789

TI Preparation of sugar modified nucleosides as antiviral agents

IN Hong, Zhi; An, Haoyun; Ding, Yili; Girardet, Jean-luc; Zhong, Weidong

PA Ribapharm Inc., USA

SO PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DT Patent

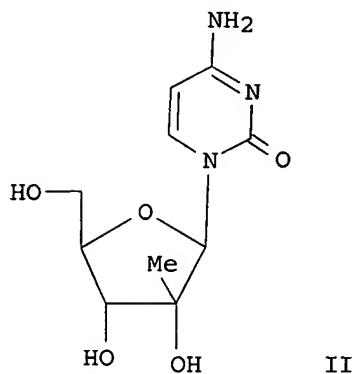
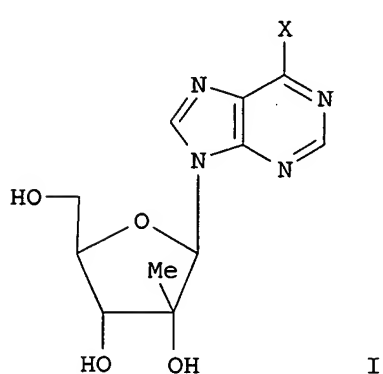
LA English

FAN.CNT 4

*Same priority date*

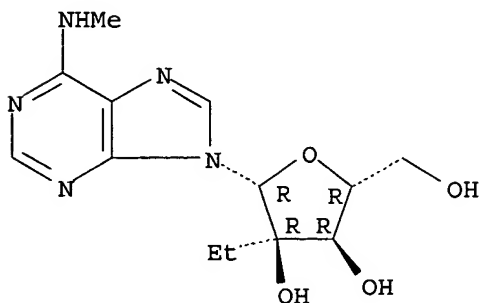
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RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF,			

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 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK  
 PRAI US 2002-350296P P 20020117  
 US 2002-391800P P 20020626  
 WO 2002-US31556 W 20021002  
 OS MARPAT 139:133789  
 GI



AB Various 2'-modified nucleoside analogs I and II wherein X is NH<sub>2</sub>, NHMe, NMe<sub>2</sub>, OMe, SMe, and corresponding prodrugs are provided, and particularly contemplated methods of use include use as antiviral agents, and especially as antiviral agents against HCV.  
 IT 565450-72-8P 565450-73-9P 565450-76-2P  
 565450-77-3P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of sugar modified nucleosides as antiviral agents)  
 RN 565450-72-8 CAPLUS  
 CN Adenosine, 2'-C-ethyl-N-methyl- (9CI) (CA INDEX NAME)

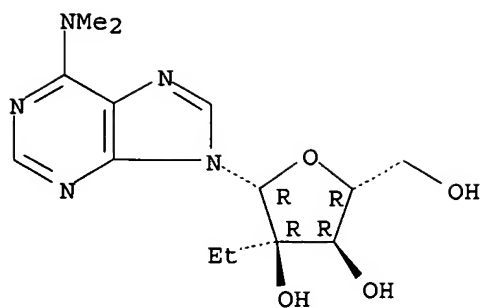
Absolute stereochemistry.



RN 565450-73-9 CAPLUS  
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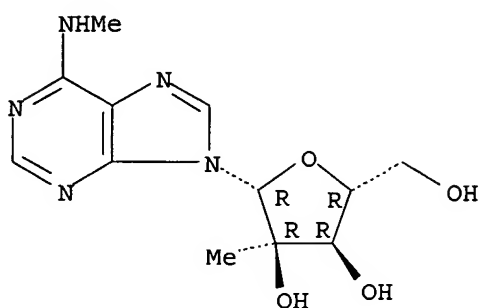
Absolute stereochemistry.





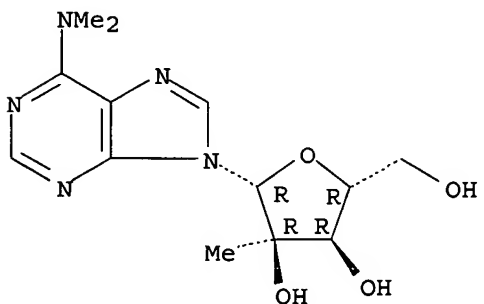
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Absolute stereochemistry.



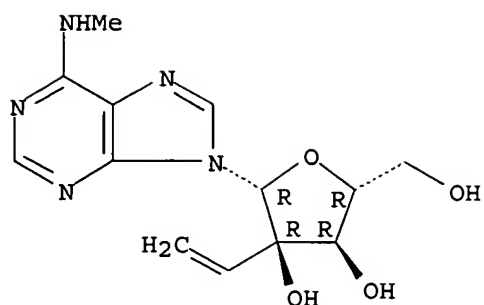
RN 565450-77-3 CAPLUS  
 CN Adenosine, N,N-dimethyl-2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 565450-98-8 565450-99-9 565451-03-8  
 565451-04-9  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (preparation of sugar modified nucleosides as antiviral agents)  
 RN 565450-98-8 CAPLUS  
 CN Adenosine, 2'-C-ethenyl-N-methyl- (9CI) (CA INDEX NAME)

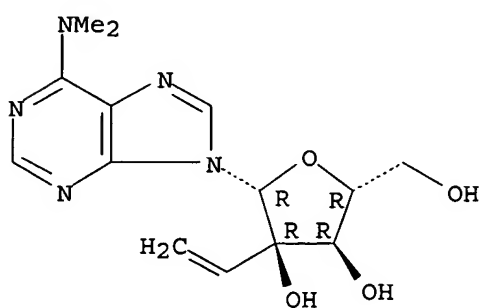
Absolute stereochemistry.



RN 565450-99-9 CAPLUS

CN Adenosine, 2'-C-ethenyl-N,N-dimethyl- (9CI) (CA INDEX NAME)

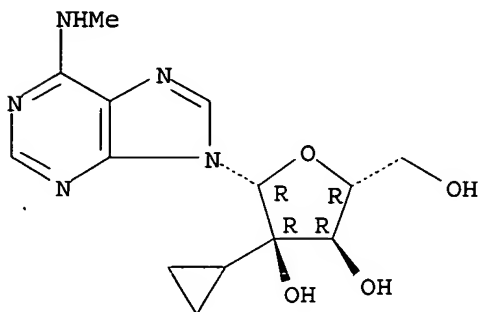
Absolute stereochemistry.



RN 565451-03-8 CAPLUS

CN Adenosine, 2'-C-cyclopropyl-N-methyl- (9CI) (CA INDEX NAME)

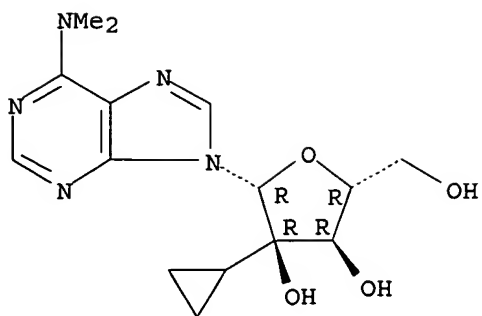
Absolute stereochemistry.



RN 565451-04-9 CAPLUS

CN Adenosine, 2'-C-cyclopropyl-N,N-dimethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L28 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1969:502192 CAPLUS

DN 71:102192

TI Substituted purine nucleosides

IN Walton, Edward

PA Merck and Co., Inc.

SO Fr., 11 pp.

CODEN: FRXXAK

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 1521076		19680412	FR 1967-104388	19670427
	DE 1593110			DE	
	DE 1620053			DE	
	DE 1695411			DE	
	DE 1768470			DE	
	DE 1770700			DE	
	GB 1163102			GB	
	GB 1187824			GB	
	GB 1187825			GB	
	US 3480613		19691125	US	19670703
PRAI	US		19660502		

AB The title compds. (I), which were useful in preparing nucleotides for the study of nucleic acid metabolism were prepared by treating 2,6-substituted chloromercuri-purines with 2,3,5,-tri-O-acyl-2-methyl-D-ribofuranosyl halides to give 2,6-substituted 9-(2,3,5,-tri-O-acyl-2-C-methyl-D-ribofuranosyl) purines which were solvolized, aminolyzed, or mercaptolyzed. Thus, a solution of 5 g. 2-C-methyl-D-ribo-1,4-lactone in 100 cc. dry pyridine at 5° was treated with 17 cc. BzCl, heated 65-70° 4 hrs., and kept at room temperature 6 hrs. to give 60% 2,3,5-tri-O-benzoyl-2-C-methyl-D-ribo-1,4-lactone (II) m. 138-40°. A solution 7 g. II in 30 cc. dry tetrahydrofuran under N was cooled and treated with 58.8 cc. M di-sec-isoamyl-borane, kept at room temperature 16 hrs., 6 cc. H2O added, refluxed 0.5 hr., and at 5°, 11.5 cc. H2O2 added keeping the pH 7-8 by the addition of about 7 cc. 3N Na2CO3 to give 37% 2,3,5-tri-O-benzoyl-2-C-methyl-( $\alpha$  and  $\beta$ )-D-ribofuranose (III) purified by chromatog. on silica gel. A solution 4.2 g. III (containing a small amount of 3,5-di-O-benzoyl-2-C-methyl-( $\alpha,\beta$ )-D-ribofuranose) in 80 cc. dry pyridine was treated with 8.0 cc. BzCl and heated at 90° for 4 hrs. to give 42% 1,2,3,5-tetra-O-benzoyl-2-C-methyl- $\beta$ -D-ribofuranose (IV), m. 155-6°, and 57% 1,2,3,5-tetra-O-benzoyl-2-C-methyl- $\alpha$ -D-ribofuranose (V) as an oil. to 100 cc. of a saturated HCl Et2O solution was added 2 cc. AcCl and 1.5 g. IV and the mixture kept at room temperature 2 hrs. to give 2,3,5-tri-O-benzoyl-2-C-methyl- $\beta$ -D-ribofuranosyl chloride (VI). A solution of 1.5 g. V in 7.5 cc. AcOH was treated with a solution of 0.25 cc. AcBr and 7.5 cc. 32% HBr in AcOH and the mixture kept at 25° 24 hrs. to give 2,3,5-tri-O-benzoyl-

2-C-methyl- $\beta$ -D-ribofuranosyl bromide. From a suspension of 5.95 g. 2-acetamido-9-chloromercuri-6-hydroxypurine in 175 cc. xylene about 25 cc. of xylene was distilled to remove traces of H<sub>2</sub>O, the VI prepared from 8.1 g. IV in 25 cc. dry xylene was added, and the mixture stirred at 50-100° and refluxed 1 hr. to give 2-acetamido-9-(2,3,5-tri-O-benzoyl-2-methyl-D-ribofuranosyl)-6-hydroxypurine (VII). Similarly prepared were: 6-N-methyl-9-(2,3,5-tri-O-benzoyl-2-C-methyl-D-ribofuranosyl)benzamidopurine (VIII); 6-chloro-9-(2,3,5-tri-O-benzoyl-2-C-methyl-D-ribofuranosyl)purine (IX); 2,6-dibenzamido-9-(2,3,5-tri-O-benzoyl-2-C-methyl-D-ribofuranosyl)purine (X); 6-methyl-9-(2,3,5-tri-O-benzoyl-2-C-methyl-D-ribofuranosyl)purine (XI); 6-benzamido-9-(2,3,5-tri-O-benzoyl-2-C-methyl-D-ribofuranosyl)purine (XII). A suspension of 1.0 g. IX in 25 cc. MeOH containing 6.5 g. Me<sub>2</sub>NH was heated 10 hrs. in a sealed tube at 100° and concentrated in vacuo and the residue dissolved in 25 cc. H<sub>2</sub>O, washed with

C<sub>6</sub>H<sub>6</sub>,

and treated with 2 g. Dowex II-X8 strongly basic anion-exchange resin to give I (R<sub>1</sub> = Me<sub>2</sub>N, R = H). A mixture of 1.2 g. X in 12 cc. dry MeOH was treated with 97 mg. Na in 12 cc. MeOH and refluxed 3 hrs. to give I (R = R<sub>1</sub> = NH<sub>2</sub>). A suspension of 1.25 g. IX and 307 mg. thiourea in 3 cc. EtOH was refluxed 40 min. to give 9-(2,3,5-tri-O-benzoyl-2-C-methyl-D-ribofuranosyl)purine-6-thiol, (XIII). A suspension of 400 mg. XIII in 3.5 cc. MeOH was treated with a solution prepared from 19.5 mg. Na in 3.5 cc. dry MeOH and the mixture refluxed 3 hrs. to give I (R = H, R<sub>1</sub> = SH). A mixture 1 g. IX, 8 g. MeNH<sub>2</sub>, and 25 g. MeOH was heated at 100° 10 hrs. in a sealed tube to give I (R = H, R<sub>1</sub> = NHMe). A solution of 1 g. IX in 17 cc. dioxane, 80 mg. MgO, and 0.5 g. of 5% Pd on C was shaken 98 hrs. in a H atmospheric at 25° to give 9-(2,3,5-tri-O-benzoyl-2-C-methyl-D-ribofuranosyl)purine (XIV). A solution 400 mg. XIV in 8 cc. dry MeOH was treated with a solution of 23 mg. Na in 8 cc. dry MeOH and refluxed 3 hrs. to give I (R = R<sub>1</sub> = H). A suspension of 800 mg. VII in 8 cc. anhydrous MeOH was treated with a solution of 105 mg. Na in 8 cc. dry MeOH and the mixture refluxed 2 hrs. to give 9-(2-C-methyl-D-ribofuranosyl)guanine. A solution of 479 mg. IX in 20 cc. MeOH containing 2 g. NH<sub>3</sub> was kept at 5° 20 hrs. to give I (R = H, R<sub>1</sub> = Cl). A suspension of 3.9 g. VIII in 40 cc. dry MeOH was treated with a solution prepared from 175 mg. Na in 40 cc. dry MeOH, and the mixture refluxed 3.5 hrs. to give I (R = H, R<sub>1</sub> = MeNH). A solution of 2.0 g. IX in 30 cc. EtOH containing 12 cc. EtNH<sub>2</sub> was heated in a sealed tube at 100° for 10 hrs. to give I (R = H, R<sub>1</sub> = NH<sub>2</sub>Et). A solution of 605 mg. IX in 30 cc. dry MeOH was treated with a solution prepared by saturating 20

cc. of a

0.1N NaOMe solution with MeSH, and the mixture refluxed 30 min. to give I (R = H, R<sub>1</sub> = SMe). A mixture of 590 mg. XI and 50 cc. dry MeOH was treated with a solution prepared from 23 mg. Na and 10 cc. dry MeOH, and the mixture

refluxed

4 hrs. to give I (R = H, R<sub>1</sub> = Me). A mixture 1.48 g. XII and 15 cc. MeOH was treated with a solution prepared from 70 mg. Na and 5 cc. MeOH, and the mixture refluxed 45 min. to give 59% 2'-C-methyladenosine.

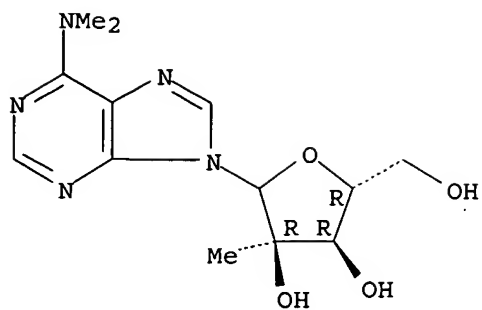
IT 25899-60-9P 25899-63-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 25899-60-9 CAPLUS

CN Adenine, N,N-dimethyl-9-(2-C-methyl-D-ribofuranosyl)- (8CI) (CA INDEX NAME)

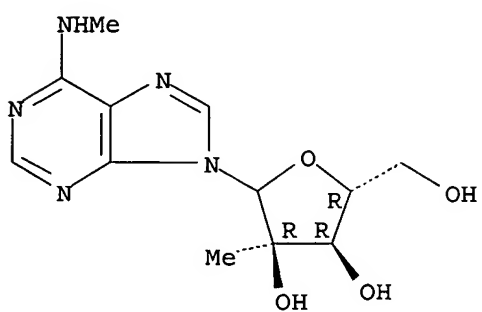
Absolute stereochemistry.

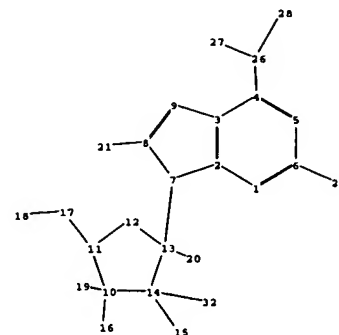
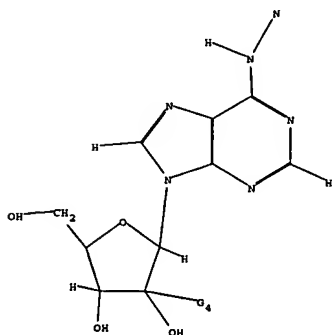


RN 25899-63-2 CAPLUS

CN Adenine, N-methyl-9-(2-C-methyl-D-ribofuranosyl)- (8CI) (CA INDEX NAME)

Absolute stereochemistry.





15 16 17 18 19 20 21 22 26 27 28 32

1 2 3 4 5 6 7 8 9 10 11 12 13 14

29

4-26 6-22 7-13 8-21 10-16 10-19 11-17 13-20 14-15 14-32 17-18 26-27 26-28

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2-7 3-9 4-26 7-8 7-13 8-9 10-11 10-14 10-16 11-12 12-13 13-14 14-15 14-32 26-28

6-22 8-21 10-19 11-17 13-20 17-18 26-27

1-2 1-6 2-3 3-4 4-5 5-6

Search for independent claims

4+5 where  $z$  is:

C - or O - , both open

4 X is:

$$\textcircled{w} - \overset{\text{H}}{\underset{|}{\text{N}}} - \text{NK}(\text{open})$$

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom  
13:Atom 14:Atom 15:CLASS16:CLASS17:CLASS18:CLASS19:CLASS20:CLASS21:CLASS22:CLASS  
26:CLASS27:CLASS28:CLASS29:CLASS32:CLASS

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Uploading C:\Program Files\Stnexp\Queries\10530627i.str

L41 STRUCTURE UPLOADED

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SAMPLE SCREEN SEARCH COMPLETED - 2 TO ITERATE

100.0% PROCESSED 2 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 2 TO 124

PROJECTED ANSWERS: 0 TO 0

L42 0 SEA SSS SAM L41

=> s l41 sss full

FULL SEARCH INITIATED 15:35:19 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 17 TO ITERATE

100.0% PROCESSED 17 ITERATIONS

8 ANSWERS

SEARCH TIME: 00.00.02

L43 8 SEA SSS FUL L41

=> d 1-8 l43

L43 ANSWER 1 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN

RN 622380-62-5 REGISTRY

ED Entered STN: 01 Dec 2003

CN 3H-Indole-3-acetic acid, 2-[9-(2-C-methyl-β-D-ribofuranosyl)-9H-purin-6-yl]hydrazide (9CI) (CA INDEX NAME)

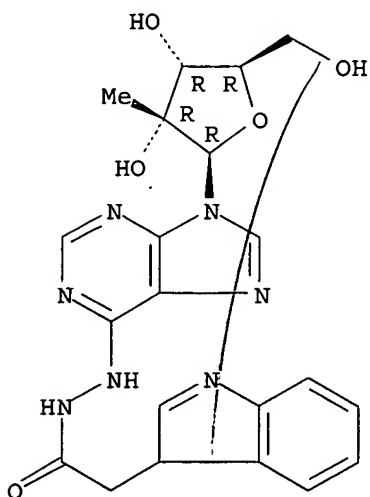
FS STEREOSEARCH

MF C21 H23 N7 O5

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



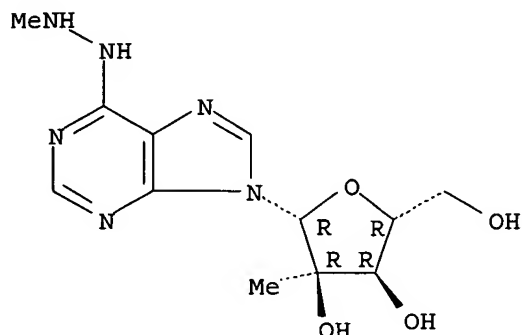


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L43 ANSWER 2 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 622379-60-6 REGISTRY  
ED Entered STN: 01 Dec 2003  
CN Inosine, 2'-C-methyl-, methylhydrazone (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C12 H18 N6 O4  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.

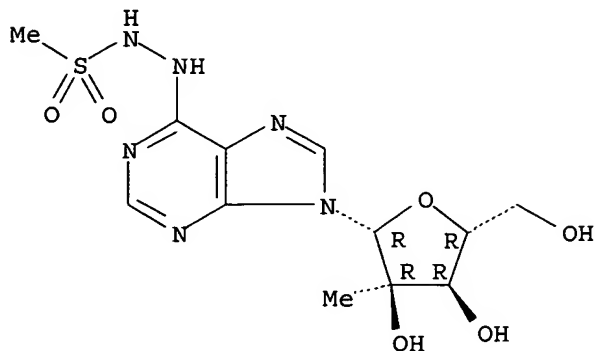


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L43 ANSWER 3 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 565435-17-8 REGISTRY  
ED Entered STN: 13 Aug 2003  
CN Methanesulfonic acid, 2-[9-(2-C-methyl- $\beta$ -D-ribofuranosyl)-9H-purin-6-yl]hydrazide (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
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SR CA  
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

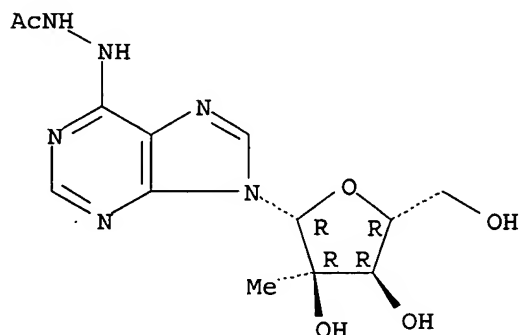


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L43 ANSWER 4 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 565435-16-7 REGISTRY  
ED Entered STN: 13 Aug 2003  
CN Acetic acid, 2-[9-(2-C-methyl- $\beta$ -D-ribofuranosyl)-9H-purin-6-yl]hydrazide (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C13 H18 N6 O5  
SR CA  
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

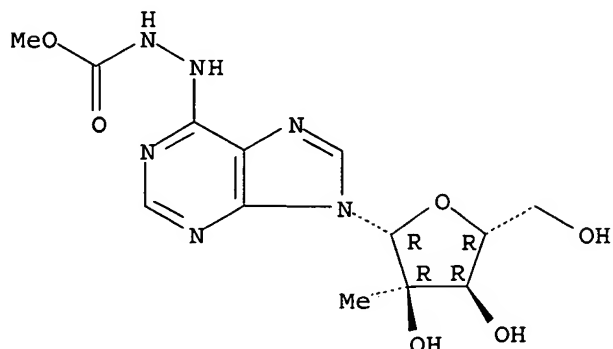


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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L43 ANSWER 5 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 565435-15-6 REGISTRY  
ED Entered STN: 13 Aug 2003  
CN Hydrazinecarboxylic acid, 2-[9-(2-C-methyl- $\beta$ -D-ribofuranosyl)-9H-purin-6-yl]-, methyl ester (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C13 H18 N6 O6  
SR CA  
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

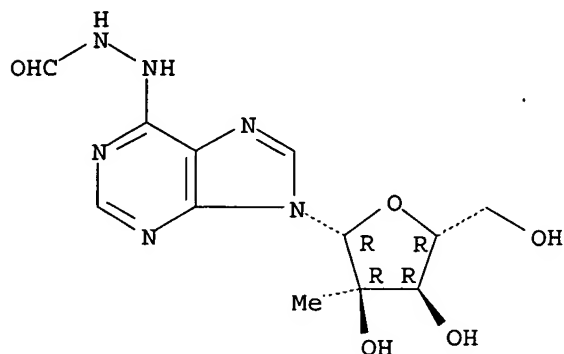


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1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L43 ANSWER 6 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 565435-13-4 REGISTRY  
ED Entered STN: 13 Aug 2003  
CN Inosine, 2'-C-methyl-, formylhydrazone (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C12 H16 N6 O5  
SR CA  
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

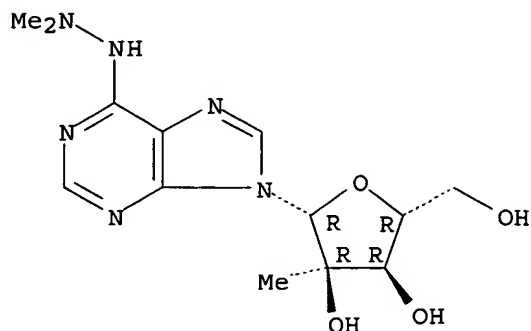


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L43 ANSWER 7 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 565435-11-2 REGISTRY  
ED Entered STN: 13 Aug 2003  
CN Inosine, 2'-C-methyl-, 2,2-dimethylhydrazone (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C13 H20 N6 O4  
SR CA  
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

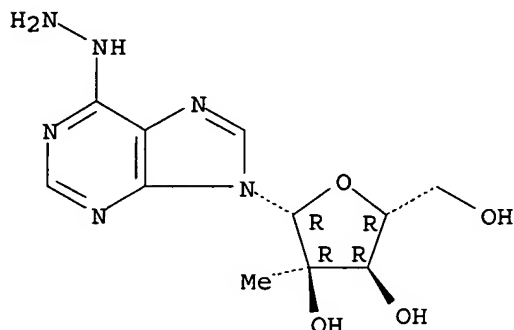


**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L43 ANSWER 8 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 565435-10-1 REGISTRY  
ED Entered STN: 13 Aug 2003  
CN Inosine, 2'-C-methyl-, hydrazone (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C11 H16 N6 O4  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus

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FULL ESTIMATED COST	182.58	1854.37
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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FILE LAST UPDATED: 5 Jul 2006 (20060705/ED)

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=> s 143

L44 2 L43

=> d bib abs hitstr 1-2

L44 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:892793 CAPLUS

DN 139:365176

TI Preparation of nucleoside derivatives for treating hepatitis C virus infection

IN Roberts, Christopher Don; Dyatkina, Natalia B.; Keicher, Jesse D.; Liehr, Sebastian Johannes Reinhard; Hanson, Eric Jason

PA Genelabs Technologies, Inc., USA

SO PCT Int. Appl., 182 pp.

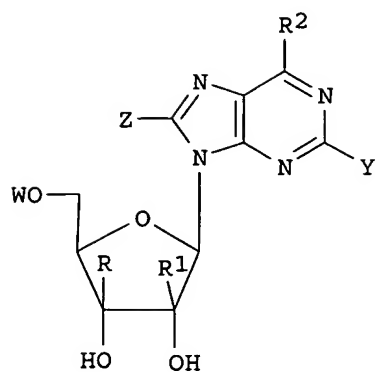
CODEN: PIXXD2

DT Patent

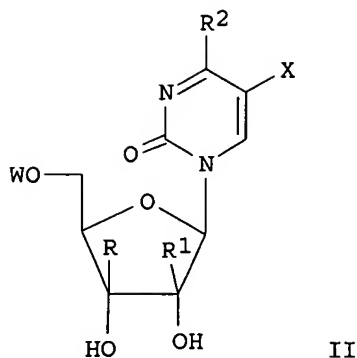
LA English

FAN.CNT 1

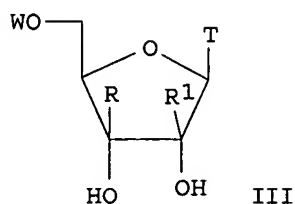
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PI	WO 2003093290	A2	20031113	WO 2003-US14237	20030506
	WO 2003093290	A3	20040318		
	WO 2003093290	C1	20050519		
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	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
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	AU 2003232071	A1	20031117	AU 2003-232071	20030506
	US 2004063658	A1	20040401	US 2003-431631	20030506
	EP 1501850	A2	20050202	EP 2003-747674	20030506
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	NO 2004005247	A	20041130	NO 2004-5247	20041130
PRAI	US 2002-378624P	P	20020506		
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	WO 2003-US14237	W	20030506		
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GI					



I



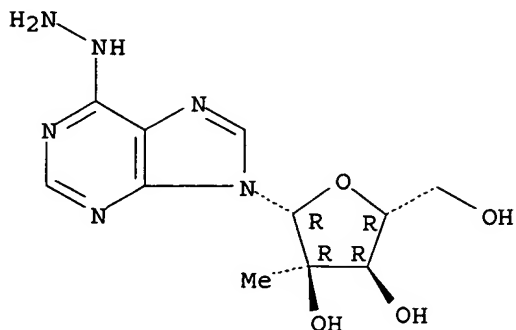
II



III

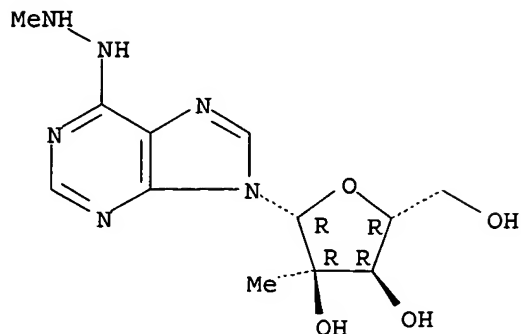
- AB Nucleosides I-III, wherein R and R1 are independently H, alkyl, alkenyl, alkynyl, provided that R and R1 are not both H; R2 is alkyl, cycloalkyl, alkenyl, alkynyl, acylamino, guanidino, amidino, thioacylamino, OH, alkoxy, halo, nitro, aryl, heteroaryl, substituted amine; W is H, phosphate, phosphonate, acyl, alkyl, sulfonate, lipid, amino acid, sugar residue, peptide, cholesterol; X is H, halo, alkyl, substituted amine; Y is H, halo, OH, alkylthio, substituted amine; Z is H, halo, OH, alkyl, substituted amine; T is nucleobase, were prepared as HCV RNA polymerase inhibitors and for treating hepatitis C virus infections. Thus, 2-(4-amino-pyrrolo[3,2-c]pyridin-1-yl)-5-hydroxymethyl-3-methyltetrahydrofuran-3,4-diol was prepared for treating hepatitis C virus infections (no data). Different kind of formulation such as tablet, capsule, suspension, injectable, and suppository formulation are reported.
- IT 565435-10-1P 622379-60-6P 622380-62-5P  
 RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of nucleoside derivs. for treating hepatitis C virus infection)
- RN 565435-10-1 CAPLUS
- CN Inosine, 2'-C-methyl-, hydrazone (9CI) (CA INDEX NAME)

Absolute stereochemistry.



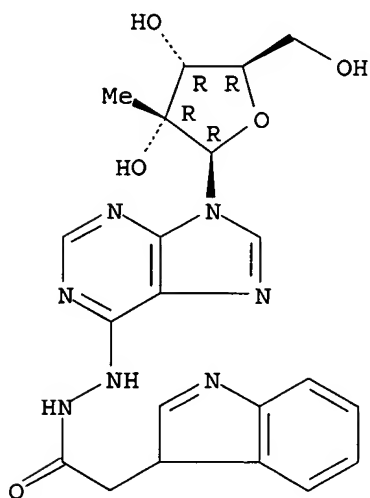
RN 622379-60-6 CAPLUS  
CN Inosine, 2'-C-methyl-, methylhydrazone (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 622380-62-5 CAPLUS  
CN 3H-Indole-3-acetic acid, 2-[9-(2-C-methyl-β-D-ribofuranosyl)-9H-purin-6-yl]hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L44 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 2003:591196 CAPLUS  
DN 139:133790  
TI Preparation of 2'-β-modified-6-substituted adenosine analogs and  
their use as antiviral agents  
IN An, Haoyun; Ding, Yili; Shaw, Stephanie; Hong, Zhi  
PA Ribapharm Inc., USA  
SO PCT Int. Appl., 45 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 4

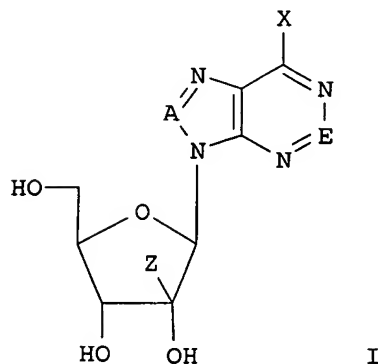
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PATENT NO.                      KIND              DATE                      APPLICATION NO.                      DATE  
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PI WO 2003062256                      A1              20030731                      WO 2002-US34026                      20021023  
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,

LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,  
 UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2002-350296P P 20020117

OS MARPAT 139:133790

GI



AB Various 2'-beta-methyl-6-substituted adenosine analogs I in which Z is selected from the group consisting of an alkyl, an O-alkyl, an alkenyl, an alkynyl, and CN, wherein the alkyl, the alkenyl, or the alkynyl is optionally substituted with a halogen or OH; A is CH or N, and E is C-R6 or N, such that (1) when A is CH then E is C-R6 or N, and (2) when A is N then E is CH; X is NR1R2, NR2NR3R4, NR2N=NR3, NR2N=CHR3, NR2N=O, NR2C(=O)NR3R4, NR2C(=S)NR3R4, NR2C(=NH)NR3R4, NR1C(=O)NR2NR3R4, NR2OR3, ONHC(O)O-alkyl, ONHC(O)O-aryl, ONR3R4, SNR1R2, SONR1R2, or S(O)2NR1R2; wherein R1-R4 are independently H, alkyl, substituted alkyl, O-alkyl, cyclic alkyl, heterocyclic alkyl, alkoxy, alkaryl, aryl, heterocyclic aryl, substituted aryl, acyl, substituted acyl, S(O)2-alkyl, NO, NH2, or OH; and R6 is H, NH2, halogen, N3, NHR1, NHCOR1 NR1R2, NHSO2R1, NHCONHR1, NHCSNHR1, CH2NHR1, CHR1NHR2, NHHN2, CN, alkyl, alkenyl, alkynyl, CH2-aryl, CH2-heterocycle, halogen, OH, or SH; are prepared by conventional and combinatorial library approaches. Contemplated compds. are particularly useful as therapeutic agents, and especially as antiviral agents. Thus, N6-[3-(methylthio)phenyl]-9H-(2'-beta-C-methyl-beta-D-ribofuranosyl)adenine was prepared and tested in vitro as antiviral agent against influenza virus A, bovine viral diarrhea virus, Hepatitis B virus, HIV-1 virus and human Rhinovirus.

IT 565435-10-1P 565435-11-2P 565435-13-4P

565435-15-6P 565435-16-7P 565435-17-8P

RL: CPN (Combinatorial preparation); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); CMBI (Combinatorial study); PREP (Preparation); USES (Uses)

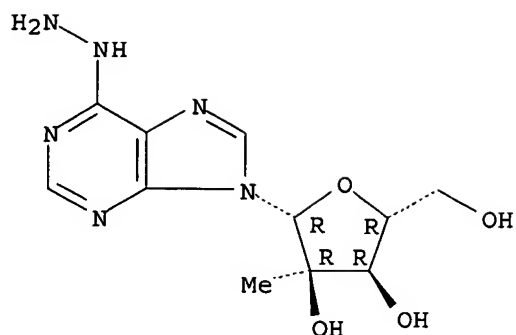
(preparation of 2'-beta-modified-6-substituted adenosine analogs and their use as antiviral agents)

RN 565435-10-1 CAPLUS

CN Inosine, 2'-C-methyl-, hydrazone (9CI) (CA INDEX NAME)

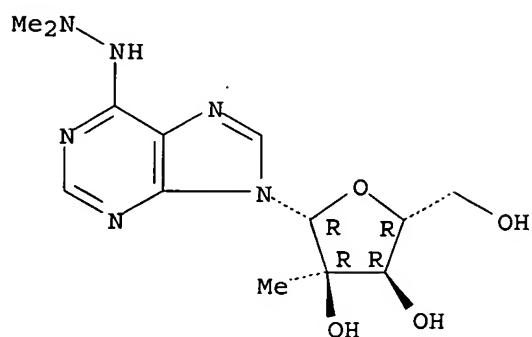
Absolute stereochemistry.





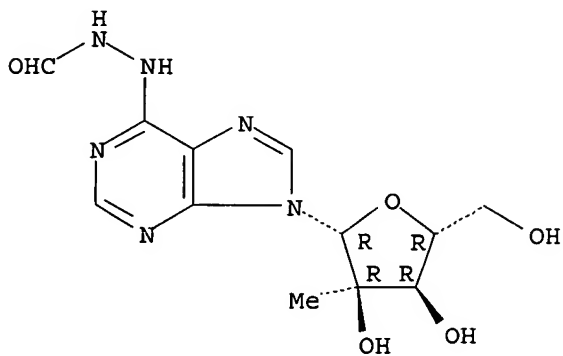
RN 565435-11-2 CAPLUS  
 CN Inosine, 2'-C-methyl-, 2,2-dimethylhydrazone (9CI) (CA INDEX NAME)

Absolute stereochemistry.



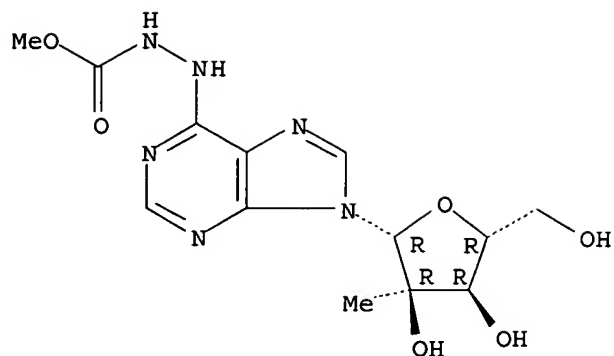
RN 565435-13-4 CAPLUS  
 CN Inosine, 2'-C-methyl-, formylhydrazone (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 565435-15-6 CAPLUS  
 CN Hydrazinecarboxylic acid, 2-[9-(2-C-methyl- $\beta$ -D-ribofuranosyl)-9H-purin-6-yl]-, methyl ester (9CI) (CA INDEX NAME)

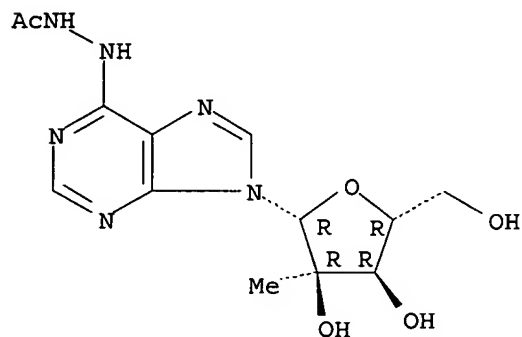
Absolute stereochemistry.



RN 565435-16-7 CAPLUS

CN Acetic acid, 2-[9-(2-C-methyl- $\beta$ -D-ribofuranosyl)-9H-purin-6-yl]hydrazide (9CI) (CA INDEX NAME)

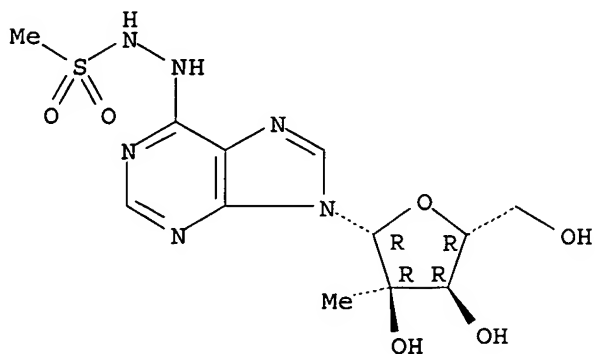
Absolute stereochemistry.



RN 565435-17-8 CAPLUS

CN Methanesulfonic acid, 2-[9-(2-C-methyl- $\beta$ -D-ribofuranosyl)-9H-purin-6-yl]hydrazide (9CI) (CA INDEX NAME)

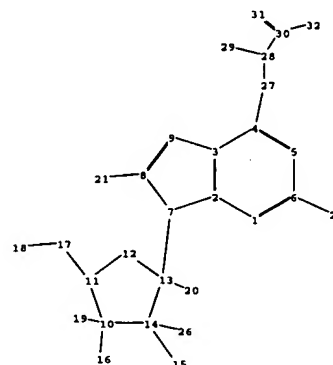
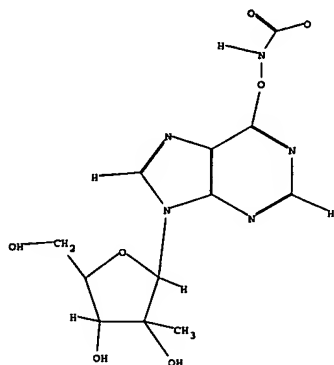
Absolute stereochemistry.



RE.CNT 4

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

10/530,627



chain nodes :

15 16 17 18 19 20 21 22 26 27 28 29 30 31 32

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14

chain bonds :

4-27 6-22 7-13 8-21 10-16 10-19 11-17 13-20 14-15 14-26 17-18 27-28 28-29 28-30 30-31 30-32

ring bonds :

1-2 1-6 2-3 2-7 3-4 3-9 4-5 5-6 7-8 8-9 10-11 10-14 11-12 12-13 13-14

exact/norm bonds :

2-7 3-9 4-27 7-8 7-13 8-9 10-11 10-14 10-16 11-12 12-13 13-14 14-15 27-28 28-30 30-31 30-32

exact bonds :

6-22 8-21 10-19 11-17 13-20 14-26 17-18 28-29

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

G1:CH3,NH2,H

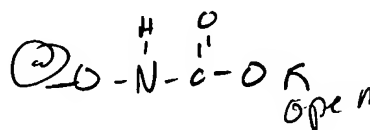
G2:CH3,OH,MeO

G3:CN

Match level :

Search for independent  
claims 6+7 where

$Z = CH_3 + X$  is!



1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom  
13:Atom 14:Atom 15:CLASS16:CLASS17:CLASS18:CLASS19:CLASS20:CLASS21:CLASS22:CLASS  
26:CLASS27:CLASS28:CLASS29:CLASS30:CLASS31:CLASS32:CLASS

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal600txm

PASSWORD:

\* \* \* \* \* RECONNECTED TO STN INTERNATIONAL \* \* \* \* \*  
SESSION RESUMED IN FILE 'REGISTRY' AT 15:30:31 ON 06 JUL 2006  
FILE 'REGISTRY' ENTERED AT 15:30:31 ON 06 JUL 2006  
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	167.38	1496.27
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-16.50

=>

Uploading C:\Program Files\Stnexp\Queries\10530627h.str

L35 STRUCTURE UPLOADED

=> d l35

L35 HAS NO ANSWERS

L35 STR

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

Structure attributes must be viewed using STN Express query preparation.

=> s l35 sss sam

SAMPLE SEARCH INITIATED 15:30:58 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 5 TO ITERATE

100.0% PROCESSED 5 ITERATIONS 0 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 5 TO 234  
PROJECTED ANSWERS: 0 TO 0

L36 0 SEA SSS SAM L35

=> s l35 sss full

FULL SEARCH INITIATED 15:31:04 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 106 TO ITERATE

100.0% PROCESSED 106 ITERATIONS 2 ANSWERS  
SEARCH TIME: 00.00.01

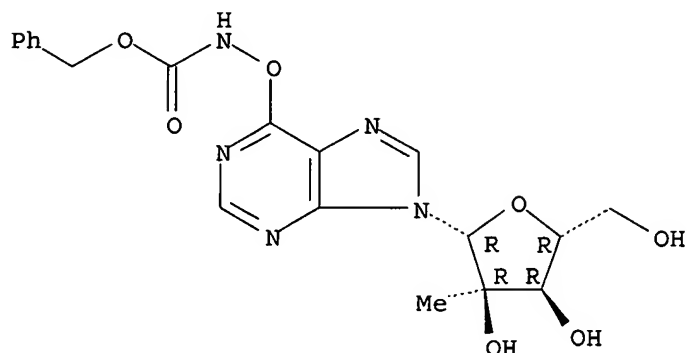
L37 2 SEA SSS FUL L35

=> d 1-2 l37

L37 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 565435-21-4 REGISTRY

ED Entered STN: 13 Aug 2003  
 CN Carbamic acid, [[9-(2-C-methyl- $\beta$ -D-ribofuranosyl)-9H-purin-6-yl]oxy]-  
 , phenylmethyl ester (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C19 H21 N5 O7  
 SR CA  
 LC STN Files: CA, CAPLUS

Absolute stereochemistry.

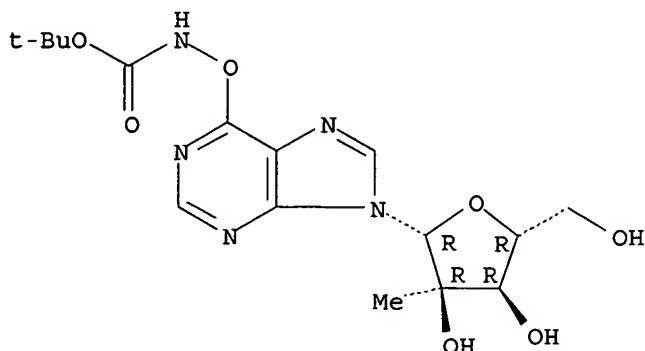


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L37 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2006 ACS on STN  
 RN 565435-20-3 REGISTRY  
 ED Entered STN: 13 Aug 2003  
 CN Carbamic acid, [[9-(2-C-methyl- $\beta$ -D-ribofuranosyl)-9H-purin-6-yl]oxy]-  
 , 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C16 H23 N5 O7  
 SR CA  
 LC STN Files: CA, CAPLUS

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	338.56	1667.45
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-16.50

FILE 'CAPLUS' ENTERED AT 15:31:27 ON 06 JUL 2006  
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FILE COVERS 1907 - 6 Jul 2006 VOL 145 ISS 2  
 FILE LAST UPDATED: 5 Jul 2006 (20060705/ED)

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<http://www.cas.org/infopolicy.html>

=> s l35  
 REGISTRY INITIATED  
 Substance data SEARCH and crossover from CAS REGISTRY in progress...  
 Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 15:31:32 FILE 'REGISTRY'  
 SAMPLE SCREEN SEARCH COMPLETED - 5 TO ITERATE

100.0% PROCESSED 5 ITERATIONS 0 ANSWERS  
 SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:	ONLINE	**COMPLETE**
	BATCH	**COMPLETE**
PROJECTED ITERATIONS:	5 TO	234
PROJECTED ANSWERS:	0 TO	0

L38 0 SEA SSS SAM L35

L39 0 L38

=> s l37  
 L40 1 L37

=> d bib 140

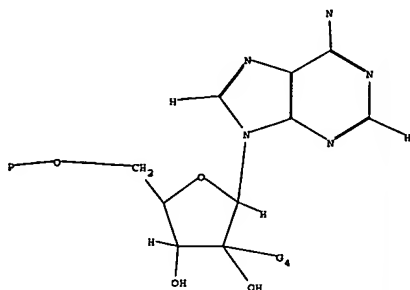
L40 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2003:591196 CAPLUS  
 DN 139:133790  
 TI Preparation of 2'- $\beta$ -modified-6-substituted adenosine analogs and  
 their use as antiviral agents  
 IN An, Haoyun; Ding, Yili; Shaw, Stephanie; Hong, Zhi  
 PA Ribapharm Inc., USA  
 SO PCT Int. Appl., 45 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003062256	A1	20030731	WO 2002-US34026	20021023
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
	GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
	LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,				
	PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,				
	UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,				
	KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,				
	FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF,				
	CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRAI US 2002-350296P P 20020117  
 OS MARPAT 139:133790  
 RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

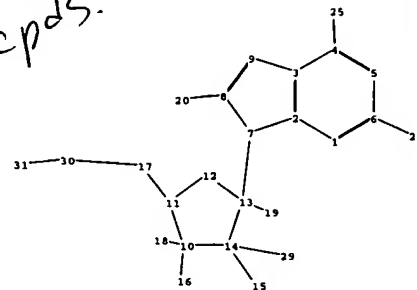


c 1



26 1

Search  
for  
phosphate substituted  
cpds.



chain nodes :

15 16 17 18 19 20 21 25 29 30 31

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14

ring/chain nodes :

26

chain bonds :

4-25 6-21 7-13 8-20 10-16 10-18 11-17 13-19 14-15 14-29 17-30 30-31

ring bonds :

1-2 1-6 2-3 2-7 3-4 3-9 4-5 5-6 7-8 8-9 10-11 10-14 11-12 12-13 13-14

exact/norm bonds :

2-7 3-9 4-25 7-8 7-13 8-9 10-11 10-14 10-16 11-12 12-13 13-14 14-15 14-29 30-31

exact bonds :

6-21 8-20 10-18 11-17 13-19 17-30

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

G1:CH3,NH2,H

G2:CH3,OH,MeO

G3:CN

G4:O,[\*1]

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom  
13:Atom 14:Atom 15:CLASS16:CLASS17:CLASS18:CLASS19:CLASS20:CLASS21:CLASS25:CLASS  
26:CLASS29:CLASS30:CLASS31:CLASS

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal600txm

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS 1 Web Page URLs for STN Seminar Schedule - N. America  
NEWS 2 "Ask CAS" for self-help around the clock  
NEWS 3 FEB 27 New STN AnaVist pricing effective March 1, 2006  
NEWS 4 APR 04 STN AnaVist \$500 visualization usage credit offered  
NEWS 5 MAY 10 CA/Caplus enhanced with 1900-1906 U.S. patent records  
NEWS 6 MAY 11 KOREAPAT updates resume  
NEWS 7 MAY 19 Derwent World Patents Index to be reloaded and enhanced  
NEWS 8 MAY 30 IPC 8 Rolled-up Core codes added to CA/Caplus and  
USPATFULL/USPAT2  
NEWS 9 MAY 30 The F-Term thesaurus is now available in CA/Caplus  
NEWS 10 JUN 02 The first reclassification of IPC codes now complete in  
INPADOC  
NEWS 11 JUN 26 TULSA/TULSA2 reloaded and enhanced with new search and  
and display fields  
NEWS 12 JUN 28 Price changes in full-text patent databases EPFULL and PCTFULL  
  
NEWS EXPRESS JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.  
  
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NEWS LOGIN Welcome Banner and News Items  
NEWS IPC8 For general information regarding STN implementation of IPC 8  
NEWS X25 X.25 communication option no longer available

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\* Eastern Daylight Time. \*  
\*\*\*\*\*

\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 17:38:32 ON 06 JUL 2006

=> file reg

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 17:38:43 ON 06 JUL 2006  
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provided by InfoChem.

STRUCTURE FILE UPDATES: 5 JUL 2006 HIGHEST RN 890705-10-9  
DICTIONARY FILE UPDATES: 5 JUL 2006 HIGHEST RN 890705-10-9

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REGISTRY includes numerically searchable data for experimental and  
predicted properties as well as tags indicating availability of  
experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10530627j.str

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

Structure attributes must be viewed using STN Express query preparation.

=> s l1 sss sam

SAMPLE SEARCH INITIATED 17:39:02 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 30 TO ITERATE

100.0% PROCESSED 30 ITERATIONS

1 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 272 TO 928

PROJECTED ANSWERS: 1 TO 80

L2 1 SEA SSS SAM L1

=> d l2

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN

RN 867258-93-3 REGISTRY

ED Entered STN: 11 Nov 2005

CN Adenosine 5'-(trihydrogen diphosphate), 2'-C-methyl-, P'→5'-ester  
with 2-[2,3-O-(1-methylethylidene)-β-D-ribofuranosyl]-4-  
thiazolecarboxamide, diammonium salt (9CI) (CA INDEX NAME)

FS STEREOSEARCH

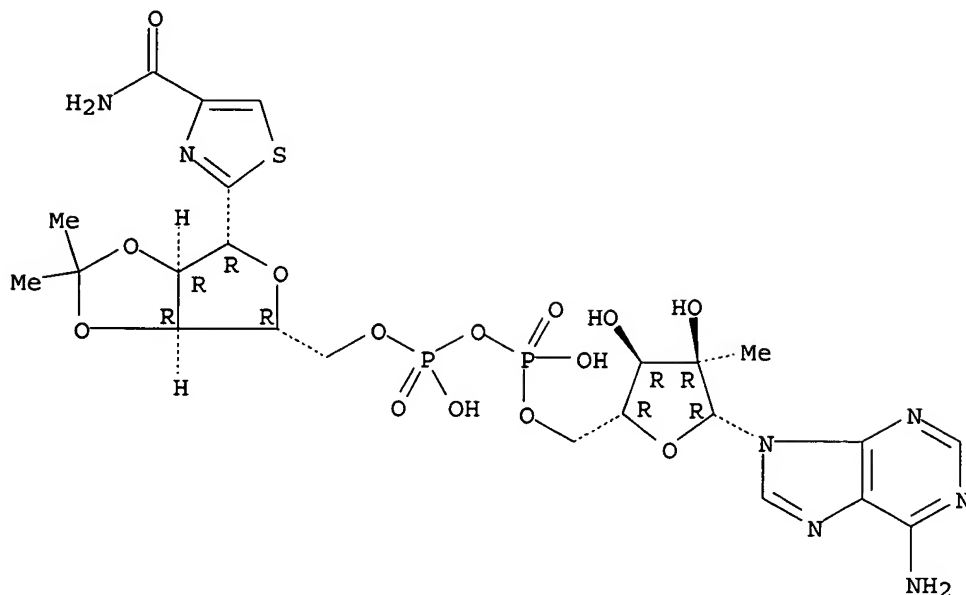
MF C23 H31 N7 O14 P2 S . 2 H3 N

SR CA

LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER  
CRN (849146-59-4)

Absolute stereochemistry.

PAGE 1-A



PAGE 2-A

● 2 NH<sub>3</sub>

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> s l1 sss full  
FULL SEARCH INITIATED 17:39:22 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 439 TO ITERATE

100.0% PROCESSED 439 ITERATIONS 18 ANSWERS  
SEARCH TIME: 00.00.01

L3 18 SEA SSS FUL L1

=> file caplus  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
168.84	169.05

FULL ESTIMATED COST

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=> s l3

L4 16 L3

=> d bib abs hitstr 1-16 l3

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=> d bib abs hitstr 1-16 l4

L4 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 2006:136728 CAPLUS  
DN 144:324202  
TI The Novel Nucleoside Analog R1479 (4'-Azidocytidine) Is a Potent Inhibitor of NS5B-dependent RNA Synthesis and Hepatitis C Virus Replication in Cell Culture  
AU Klumpp, Klaus; Leveque, Vincent; Le Pogam, Sophie; Ma, Han; Jiang, Wen-Rong; Kang, Hyunsoon; Granycome, Caroline; Singer, Margaret; Laxton, Carl; Hang, Julie Qi; Sarma, Keshab; Smith, David B.; Heindl, Dieter; Hobbs, Chris J.; Merrett, John H.; Symons, Julian; Cammack, Nick; Martin, Joseph A.; Devos, Rene; Najera, Isabel  
CS Roche Palo Alto LLC, Palo Alto, CA, 94304, USA  
SO Journal of Biological Chemistry (2006), 281(7), 3793-3799  
CODEN: JBCHA3; ISSN: 0021-9258  
PB American Society for Biochemistry and Molecular Biology  
DT Journal  
LA English  
AB Hepatitis C virus (HCV) polymerase activity is essential for HCV replication. Targeted screening of nucleoside analogs identified R1479 (4'-azidocytidine) as a specific inhibitor of HCV replication in the HCV subgenomic replicon system (IC50 = 1.28  $\mu$ M) with similar potency compared with 2'-C-methylcytidine (IC50 = 1.13  $\mu$ M). R1479 showed no effect on cell viability or proliferation of HCV replicon or Huh-7 cells at concns. up to 2 mM. HCV replicon RNA could be fully cleared from replicon cells after prolonged incubation with R1479. The corresponding 5'-triphosphate derivative (R1479-TP) is a potent inhibitor of native HCV replicase isolated from replicon cells and of recombinant HCV polymerase (NS5B)-mediated RNA synthesis activity. R1479-TP inhibited RNA synthesis as a CTP-competitive inhibitor with a Ki of 40 nM. On an HCV RNA-derived template substrate (complementary internal ribosome entry site), R1479-TP showed similar potency of NS5B inhibition compared with 3'-dCTP. R1479-TP was incorporated into nascent RNA by HCV polymerase and reduced further elongation with similar efficiency compared with 3'-dCTP under the reaction conditions. The S282T point mutation in the coding sequence of NS5B confers resistance to inhibition by 2'-C-MeATP and other 2'-methyl-nucleotides. In contrast, the S282T mutation did not confer cross-resistance to R1479.  
IT 374750-27-3  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

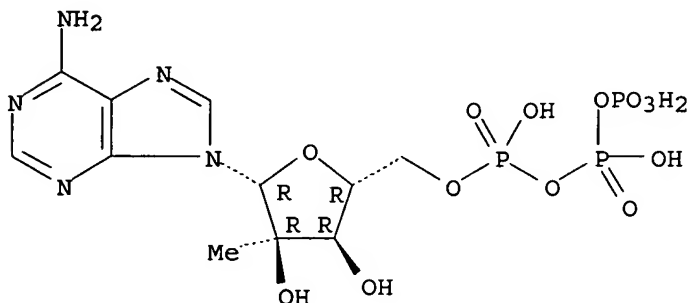
(Biological study); USES (Uses)

(novel nucleoside analog R1479 (4'-azidocytidine) is a potent inhibitor of NS5B-dependent RNA synthesis and hepatitis C virus replication in cell culture)

RN 374750-27-3 CAPLUS

CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:100316 CAPLUS

DN 144:192451

TI Preparation of nucleoside aryl phosphoramidates for use as an inhibitor of hepatitis C virus NS5B polymerase, RNA-dependent RNA polymerase, RNA viral replication and treating RNA-dependent RNA viral infections

IN Maccoss, Malcolm; Olsen, David B.

PA Merck & Co., Inc., USA

SO PCT Int. Appl., 40 pp.

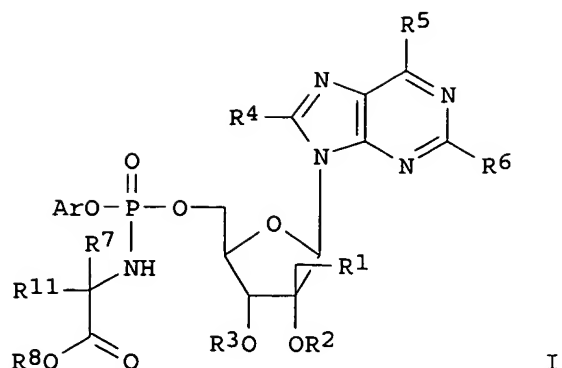
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006012078	A2	20060202	WO 2005-US21684	20050620
	WO 2006012078	A3	20060601		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
PRAI	US 2004-582667P	P	20040624		
	US 2004-619746P	P	20041018		
OS	MARPAT 144:192451				
GI					



AB Nucleoside aryl phosphoramidates I, wherein Y is (un)substituted C or N; Ar is (un)substituted Ph; R1 is hydrogen, fluoro, azido, amino, hydroxy, C1-3 alkoxy, mercapto, and C1-3 alkylthio; R2 and R3 are each independently selected from the group consisting of hydrogen, Me, C1-16 alkylcarbonyl, C2-18 alkenylcarbonyl, C1-10 alkyloxycarbonyl, C3-6 cycloalkylcarbonyl, and C3-6 cycloalkyloxycarbonyl; R4 is hydrogen, halogen, Me, azido, or amino; R5 and R6 are each independently selected from the group consisting of hydrogen, hydroxy, halogen, C1-4 alkoxy, amino, C1-4 alkylamino, di(C1-4 alkyl)amino, C3-6 cycloalkylamino, di(C3-6 cycloalkyl)amino, benzylamino, dibenzylamino, or C4-6 heterocycloalkyl, wherein alkyl, cycloalkyl, benzyl, and heterocycloalkyl; R7 is hydrogen, C1-5 alkyl, (un)substituted Ph or benzyl; R8 is hydrogen, C1-6 alkyl, C3-6 cycloalkyl, (un)substituted Ph or benzyl; R9 is hydrogen or Me, were prepared as precursors to inhibitors of RNA-dependent RNA viral polymerase. Nucleoside aryl phosphoramidates, I, alone or in combination with other agents active against RNA-dependent RNA polymerase, inhibiting RNA-dependent RNA viral replication, and/or treating RNA-dependent RNA viral infection. Thus, II was prepared (no yield) and tested as an inhibitor of hepatitis C virus (HCV) NS5B polymerase, as precursors to inhibitors of HCV replication, and/or for the treatment of hepatitis C infection (EC<sub>50</sub> less than 100  $\mu$ M).

IT 874883-59-7P 874883-60-0P

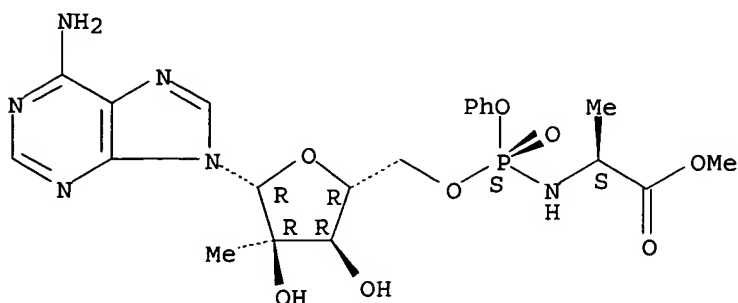
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of nucleoside aryl phosphoramidates for use as an inhibitors of hepatitis C virus NS5B polymerase, RNA-dependent RNA polymerase, RNA viral replication and treating RNA-dependent RNA viral infections)

RN 874883-59-7 CAPLUS

CN L-Alanine, N-[[P(S)]-2'-C-methyl-P-phenyl-5'-adenylyl]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

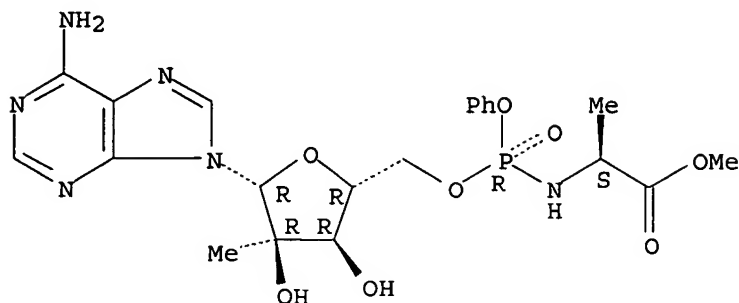


RN 874883-60-0 CAPLUS



CN L-Alanine, N-[[P(R)]-2'-C-methyl-P-phenyl-5'-adenylyl]-, methyl ester  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:410482 CAPLUS

DN 143:444

TI Inhibitory effect of 2'-substituted nucleosides on hepatitis C virus replication correlates with metabolic properties in replicon cells

AU Tomassini, Joanne E.; Getty, Krista; Stahlhut, Mark W.; Shim, Sung; Bhat, Balkrishen; Eldrup, Anne B.; Prakash, Thazha P.; Carroll, Steven S.; Flores, Osvaldo; MacCoss, Malcolm; McMasters, Daniel R.; Migliaccio, Giovanni; Olsen, David B.

CS Department of Antiviral Research, Merck Research Laboratories, West Point, PA, 19486, USA

SO Antimicrobial Agents and Chemotherapy (2005), 49(5), 2050-2058

CODEN: AMACCQ; ISSN: 0066-4804

PB American Society for Microbiology

DT Journal

LA English

AB Nucleosides have been widely used in the treatment of viral diseases, but relatively few have been identified as inhibitors of hepatitis C virus (HCV). The modified ribonucleosides, 2'-C-methyl-adenosine and 2'-O-methyl-cytidine, are potent inhibitors of HCV replication which specifically target the NS5B polymerase. Herein, a more extensive characterization of the effect of these compds. upon HCV replication in subgenomic replicons is reported. A highly selective antireplicative effect induced by the nucleosides in replicon-containing cell lines was maintained during an exponential growth period with potencies which paralleled the reduction of both pos.- and neg.-strand RNA replication. Moreover, the inhibitory effect closely correlated with the intrinsic metabolic properties of differing replicon clonal lines. Interestingly, while 2'-C-methyl-adenosine elicited similar inhibitory potencies in different cell lines, 2'-O-methyl-cytidine was found to be inactive in one replicon cell line tested, although the corresponding triphosphates comparably inhibited the in vitro activity of replication complexes isolated from these cells and the activity of NS5B polymerase using synthetic templates. The lack of antireplicative effect, attributed to poor intracellular conversion of the 2'-O-methyl-cytidine nucleoside to the active 5'-triphosphate, was reversed using a monophosphate prodrug. Thus, although replicon cells are useful for evaluating the effect of inhibitors upon HCV replication, these findings have important implications for their use in the identification and characterization of nucleosides and other chemotherapeutic agents requiring cellular metabolism

IT 374750-27-3

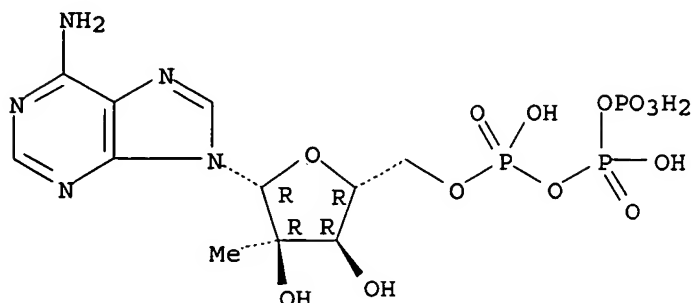
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(inhibitory effect of 2'-substituted nucleosides on hepatitis C virus replication correlates with metabolic properties in replicon cells)

RN 374750-27-3 CAPLUS

CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 2005:216597 CAPLUS  
DN 142:291323  
TI Compositions and methods for the treatment of severe acute respiratory syndrome (SARS)  
IN Hardee, Greg; Dellamary, Luis  
PA Isis Pharmaceuticals, Inc., USA  
SO PCT Int. Appl., 217 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005020885	A2	20050310	WO 2004-US16196	20040521
	WO 2005020885	A3	20050804		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRAI US 2003-472774P P 20030521

AB The invention provides compns. and methods for treating a coronavirus infection, especially a SARS CoV infection. The compns. comprise an antiviral nucleoside or mimetic thereof, or an antiviral antisense agent, in a form suitable for pulmonary or nasal delivery. The methods comprise administration to a patient in need thereof the effective amount of an antiviral composition by pulmonary or nasal instillation.

IT 374750-27-3 444019-70-9 847651-45-0

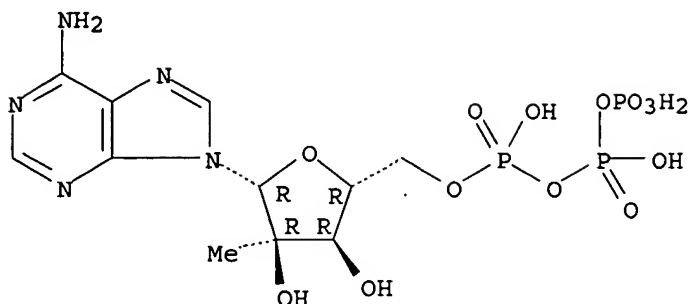
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(compns. and methods for treatment of severe acute respiratory syndrome)

RN 374750-27-3 CAPLUS

CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-C-methyl- (9CI) (CA INDEX NAME)

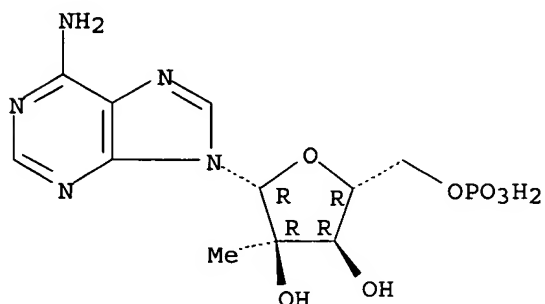
Absolute stereochemistry.



RN 444019-70-9 CAPLUS

CN 5'-Adenylic acid, 2'-C-methyl- (9CI) (CA INDEX NAME)

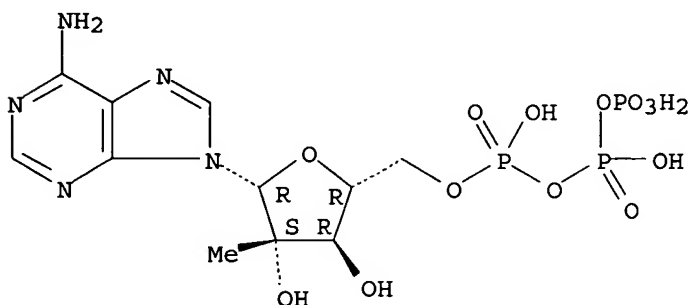
Absolute stereochemistry.



RN 847651-45-0 CAPLUS

CN 9H-Purin-6-amine, 9-[5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-2-C-methyl-beta-D-arabinofuranosyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:150037 CAPLUS

DN 142:348134

TI Synthesis, conformational analysis, and biological activity of new analogues of thiazole-4-carboxamide adenine dinucleotide (TAD) as IMP dehydrogenase inhibitors

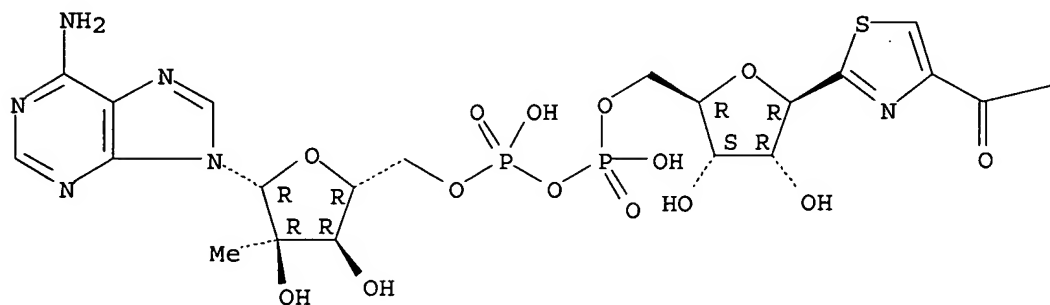
AU Franchetti, Palmarisa; Cappellacci, Loredana; Pasqualini, Michela; Petrelli, Riccardo; Jayaprakasan, Vetrichelvan; Jayaram, Hiremagalur N.; Boyd, Donald B.; Jain, Manojkumar D.; Grifantini, Mario

CS Dipartimento di Scienze Chimiche, Universita di Camerino, Camerino, 62032, Italy

SO Bioorganic & Medicinal Chemistry (2005), 13(6), 2045-2053  
 CODEN: BMECEP; ISSN: 0968-0896  
 PB Elsevier Ltd.  
 DT Journal  
 LA English  
 OS CASREACT 142:348134  
 AB Thiazole-4-carboxamide adenine dinucleotide (TAD) analogs T-2'-MeAD (1) and T-3'-MeAD (2) containing, resp., a Me group at the ribose 2'-C-, and 3'-C-position of the adenosine moiety, were prepared as potential selective human inosine monophosphate dehydrogenase (IMPDH) type II inhibitors. The synthesis of heterodinucleotides was carried out by CDI-catalyzed coupling reaction of unprotected 2'-C-methyl- or 3'-C-methyl-AMP with 2',3'-O-isopropylidene-thiazofurin 5'-monophosphate, and then deisopropylidenation. Biol. evaluation of dinucleotides 1 and 2 as inhibitors of recombinant human IMPDH type I and type II resulted in a good activity. Inhibition of both isoenzymes by T-2'-MeAD and T-3'-MeAD was noncompetitive with respect to NAD substrate. Binding of T-3'-MeAD was comparable to that of parent compound TAD, while T-2'-MeAD proved to be a weaker inhibitor. However, no significant difference was found in inhibition of the IMPDH isoenzymes. T-2'-MeAD and T-3'-MeAD were found to inhibit the growth of K562 cells (IC<sub>50</sub> 30.7 and 65.0 μM, resp.).  
 IT 867258-82-0P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (synthesis, conformational anal., and biol. activity of new analogs of thiazole-4-carboxamide adenine dinucleotide (TAD) as IMP dehydrogenase inhibitors)  
 RN 867258-82-0 CAPLUS  
 CN Adenosine 5'-(trihydrogen diphosphate), 2'-C-methyl-, P'→5'-ester with 2-β-D-ribofuranosyl-4-thiazolecarboxamide, diammonium salt (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



● 2 NH<sub>3</sub>

PAGE 1-B

—NH<sub>2</sub>

IT 444019-70-9P 849146-56-1P 849146-61-8P  
 867258-93-3P

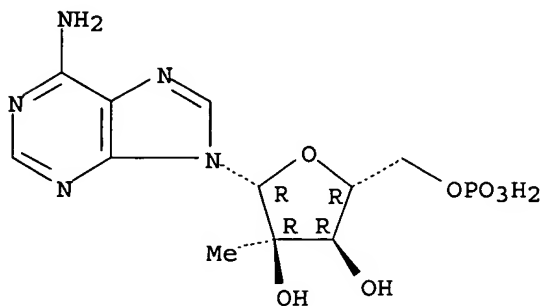
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis, conformational anal., and biol. activity of new analogs of thiazole-4-carboxamide adenine dinucleotide (TAD) as IMP dehydrogenase inhibitors)

RN 444019-70-9 CAPLUS

CN 5'-Adenylic acid, 2'-C-methyl- (9CI) (CA INDEX NAME)

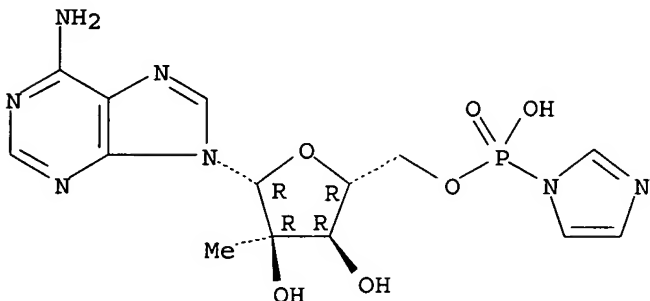
Absolute stereochemistry.



RN 849146-56-1 CAPLUS

CN Adenosine, 2'-C-methyl-, 5'-(hydrogen 1H-imidazol-1-ylphosphonate) (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

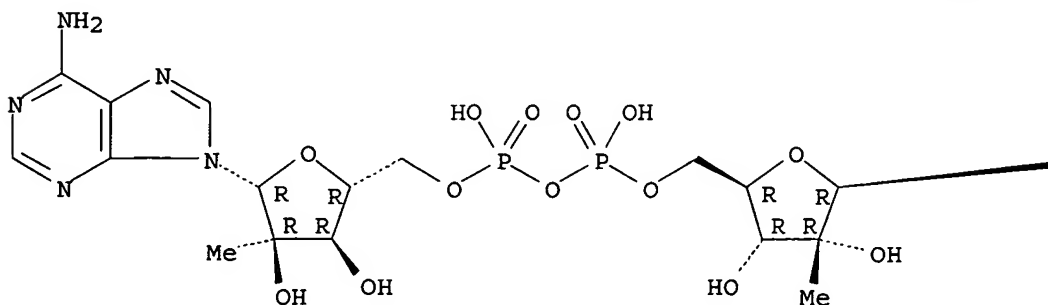


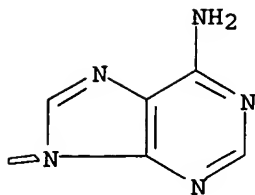
RN 849146-61-8 CAPLUS

CN Adenosine 5'-(trihydrogen diphosphate), 2'-C-methyl-, P'→5'-ester  
with 2'-C-methyladenosine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

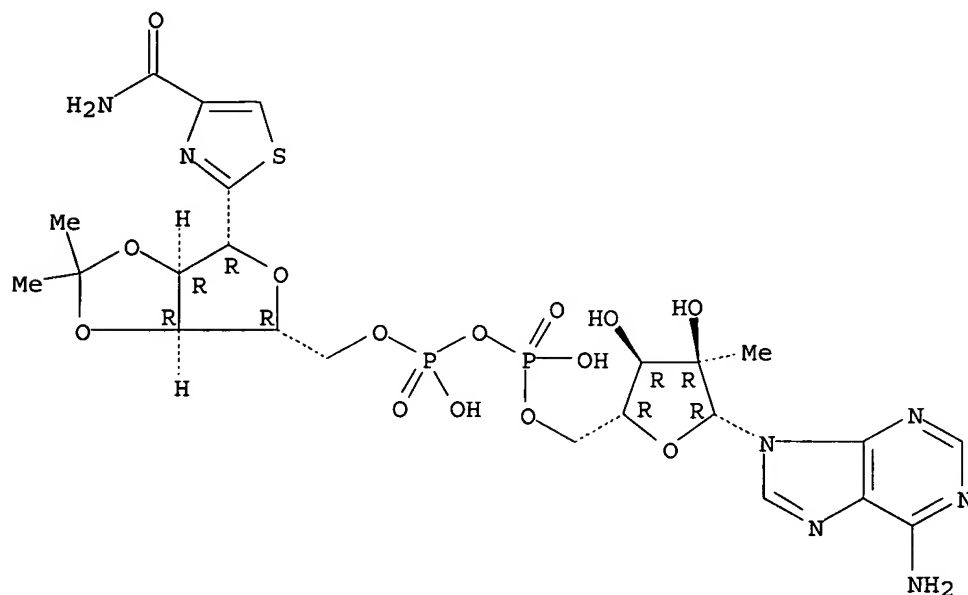




RN 867258-93-3 CAPLUS

CN Adenosine 5'-(trihydrogen diphosphate), 2'-C-methyl-, P'→5'-ester with 2-[2,3-O-(1-methylethylidene)-β-D-ribofuranosyl]-4-thiazolecarboxamide, diammonium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● 2 NH<sub>3</sub>

RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:34765 CAPLUS

DN 142:94074

TI Preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-methyl nucleoside analogs as antiviral agents

IN Clark, Jeremy

PA Pharmasset, Ltd., Barbados

SO PCT Int. Appl., 228 pp.

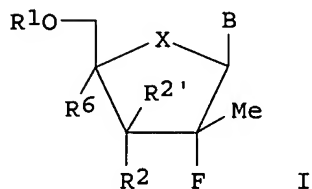
CODEN: PIXXD2

DT Patent

LA English

## FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005003147	A2	20050113	WO 2004-US12472	20040421
	WO 2005003147	A3	20050303		
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW,				
	RW:				
	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004253860	A1	20050113	AU 2004-253860	20040421
	CA 2527657	AA	20050113	CA 2004-2527657	20040421
	US 2005009737	A1	20050113	US 2004-828753	20040421
	EP 1633766	A2	20060315	EP 2004-775900	20040421
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR				
PRAI	US 2003-474368P	P	20030530		
	WO 2004-US12472	W	20040421		
OS	MARPAT 142:94074				
GI					



AB The disclosed invention provides nucleoside analogs I, wherein B is purine and pyrimidine nucleobase; X is O, S, CH<sub>2</sub>, Se, NH, N-alkyl, CHW, C(W)<sub>2</sub>; W is F, Cl, Br, iodo; R<sub>1</sub> is H, phosphate, H-phosphonate, acyl, Ph, alkyl, carboxyalkylamino, sulfonate ester, peptide, amino acid, sugar residue; R<sub>2</sub> and R<sub>2</sub>' are independently H, alkyl, alkenyl, alkynyl, vunyl, N<sub>3</sub>, CN, halogen, NO<sub>2</sub>, ester, alkoxy, thioalkyl, sulfoxide, sulfonyl; R<sub>6</sub> is alkyl, CN, Me, OMe, OEt, CH<sub>2</sub>OH, CH<sub>2</sub>F, N<sub>3</sub>, CHCN, CH<sub>2</sub>N<sub>3</sub>, CH<sub>2</sub>NH<sub>2</sub>, CH<sub>2</sub>NHMe, CH<sub>2</sub>NMe<sub>2</sub>, alkylne; and methods of treating a Flaviviridae infection, including hepatitis C virus, West Nile Virus, yellow fever virus, and a rhinovirus infection in a host, including animals, and especially human, using a (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleosides, or a pharmaceutically acceptable salt or prodrug thereof. Thus, (2'R)-2'-deoxy-2'-fluoro-2'-C-methylcytidine was prepared and tested as antiviral agent. The effects the nucleoside analogs tested on human bone marrow cells are reported. (2'R)-2'-deoxy-2'-fluoro-2'-C-methylcytidine shows activity against Rhinovirus, West Nile virus, Yellow Fever virus, and Dengue virus. Cytotoxicity and effect of nucleoside analogs on human bone marrow cells are reported.

IT 374750-27-3

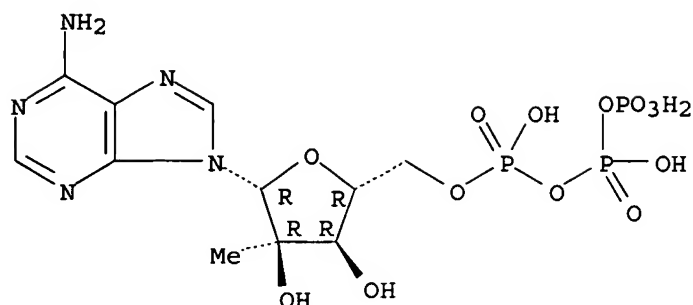
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of modified fluorinated (2'R)-2'-deoxy-2'-fluoro-2'-C-Me nucleoside analogs as antiviral agents)

RN 374750-27-3 CAPLUS

CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:1127101 CAPLUS

DN 142:49201

TI Inhibiting Coronaviridae viral replication and treating Coronaviridae viral infection with nucleoside compounds

IN Olsen, David B.; Tomassini, Joanne E.; Mao, Shi-Shan; Carroll, Steven S.

PA USA

SO U.S. Pat. Appl. Publ., 19 pp., which

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004259934	A1	20041223	US 2004-832945	20040427
PRAI	US 2003-467068P	P	20030501		
	US 2003-470658P	P	20030515		

OS MARPAT 142:49201

AB Infection by a Coronaviridae virus (e.g. a coronavirus) and/or illness due to a Coronaviridae virus are treated or protected against by administration of a therapeutically or prophylactically effective amount of certain nucleoside compds. and derivs. thereof, either alone or in a composition comprising the nucleoside compound or its derivative and a pharmaceutically acceptable carrier. In addition, replication of a Coronaviridae virus is inhibited by administration of the nucleoside compds. and derivs. thereof, either alone or in pharmaceutical compns. The nucleosides are particularly suitable for use in treating or prophylaxis of an infection by the SARS virus and/or in treating or prophylaxis of SARS, and for use in inhibiting replication of the SARS virus. The nucleoside compds. and derivs. can optionally be administered in combination with other agents active against the Coronaviridae virus and/or an illness due to the virus. The nucleoside compds. are also for use in the manufacture of medicaments for the inhibition of Coronaviridae virus replication, for the treatment or prophylaxis of Coronaviridae virus infection, and/or for the treatment or prophylaxis of an illness due to a Coronaviridae virus (e.g., the SARS virus). In addition, the compds. are for use as medicaments for the inhibition of Coronaviridae virus replication, for the treatment or prophylaxis of Coronaviridae virus infection, and/or for the treatment or prophylaxis of an illness due to a Coronaviridae virus. Compds. of the invention include e.g. 4-Amino-7-(2-C-methyl-β-D-ribofuranosyl)-7H-pyrrolo[2,3-d]pyrimidine (preparation described).

IT 374750-27-3

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

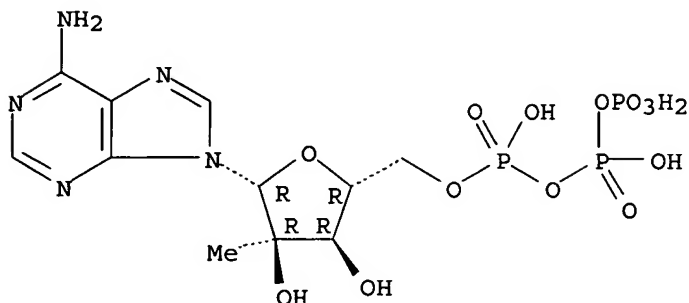
(nucleoside compds. for inhibition of Coronaviridae viral replication and treating Coronaviridae viral infection)

RN 374750-27-3 CAPLUS



CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:848340 CAPLUS

DN 142:226

TI A 7-deaza-adenosine analog is a potent and selective inhibitor of hepatitis C virus replication with excellent pharmacokinetic properties  
AU Olsen, David B.; Eldrup, Anne B.; Bartholomew, Linda; Bhat, Balkrishen; Bosserman, Michele R.; Ceccacci, Alessandra; Colwell, Lawrence F.; Fay, John F.; Flores, Osvaldo A.; Getty, Krista L.; Grobler, Jay A.; LaFemina, Robert L.; Markel, Eric J.; Migliaccio, Giovanni; Prhavic, Marija; Stahlhut, Mark W.; Tomassini, Joanne E.; MacCoss, Malcolm; Hazuda, Daria J.; Carroll, Steven S.

CS Department of Biological Chemistry, Merck Research Laboratories, West Point, PA, USA

SO Antimicrobial Agents and Chemotherapy (2004), 48(10), 3944-3953  
CODEN: AMACCQ; ISSN: 0066-4804

PB American Society for Microbiology

DT Journal

LA English

AB Improved treatments for chronic hepatitis C virus (HCV) infection are needed due to the suboptimal response rates and deleterious side effects associated with current treatment options. The triphosphates of 2'-C-methyl-adenosine and 2'-C-methyl-guanosine were previously shown to be potent inhibitors of the HCV RNA-dependent RNA polymerase (RdRp) that is responsible for the replication of viral RNA in cells. Here we demonstrate that the inclusion of a 7-deaza modification in a series of purine nucleoside triphosphates results in an increase in inhibitory potency against the HCV RdRp and improved pharmacokinetic properties. Notably, incorporation of the 7-deaza modification into 2'-C-methyl-adenosine results in an inhibitor with a 20-fold-increased potency as the 5'-triphosphate in HCV RdRp assays while maintaining the inhibitory potency of the nucleoside in the bicistronic HCV replicon and with reduced cellular toxicity. In contrast, while 7-deaza-2'-C-methyl-GTP also displays enhanced inhibitory potency in enzyme assays, due to poor cellular penetration and/or metabolism, the nucleoside does not inhibit replication of a bicistronic HCV replicon in cell culture. 7-Deaza-2'-C-methyl-adenosine displays promising in vivo pharmacokinetics in three animal species, as well as an acute oral LD in excess of 2,000 mg/kg of body weight in mice. Taken together, these data demonstrate that 7-deaza-2'-C-methyl-adenosine is an attractive candidate for further investigation as a potential treatment for HCV infection.

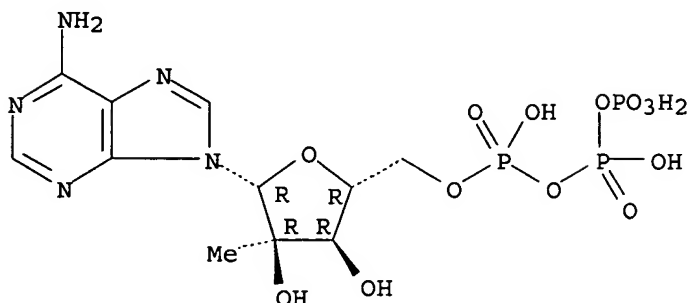
IT 374750-27-3

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(a 7-deaza-adenosine analog is a potent and selective inhibitor of hepatitis C virus replication with excellent pharmacokinetic

properties)  
 RN 374750-27-3 CAPLUS  
 CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



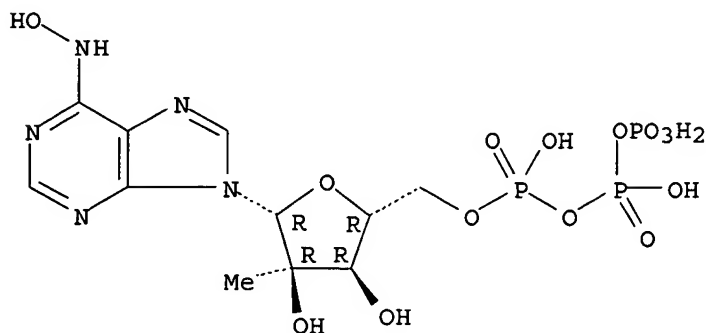
RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2004:290484 CAPLUS  
 DN 140:327061  
 TI Nucleoside derivatives for treating hepatitis C virus infection  
 IN Roberts, Christopher Don; Dyatkina, Natalia B.  
 PA Genelabs Technologies, Inc., USA  
 SO PCT Int. Appl., 119 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004028481	A2	20040408	WO 2003-US31433	20030930
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2499253	AA	20040408	CA 2003-2499253	20030930
	AU 2003279797	A1	20040419	AU 2003-279797	20030930
	EP 1572097	A2	20050914	EP 2003-773127	20030930
	EP 1572097	A3	20051207		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2006505537	T2	20060216	JP 2004-540353	20030930
	NO 2005001969	A	20050524	NO 2005-1969	20050422
PRAI	US 2002-415222P	P	20020930		
	US 2003-443169P	P	20030129		
	WO 2003-US31433	W	20030930		
OS	MARPAT 140:327061				
AB	Nucleoside compns. and methods for treating hepatitis C virus infections. Thus, 9-(2'-C-methyl-β-D-ribofuranosyl)-6-methoxyaminopurine was prepared by the reaction of 6-chloro-9-(2'-C-methyl-β-D-ribofuranosyl)purine and methxylamine. This compound exhibited anti-hepatitis C activity by inhibiting HCV polymerase.				

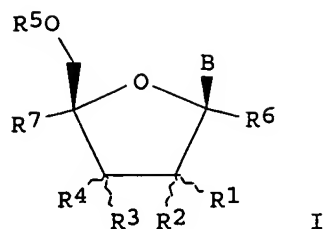
IT 677299-04-6P  
 RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (nucleoside derivs. for treating hepatitis C virus infection)  
 RN 677299-04-6 CAPLUS  
 CN Inosine 5'-(tetrahydrogen triphosphate), 2'-C-methyl-, oxime (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2004:2898 CAPLUS  
 DN 140:42424  
 TI Preparation of nucleoside derivatives as inhibitors of RNA-dependent RNA viral polymerase  
 IN Carroll, Steven S.; Olsen, David B.; Durette, Philippe L.; Bhat, Balkrishen; Dande, Prasad; Eldrup, Anne B.  
 PA Merck & Co., Inc., USA; Isis Pharmaceuticals, Inc.  
 SO PCT Int. Appl., 43 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004000858	A2	20031231	WO 2003-US19172	20030617
	WO 2004000858	A3	20050512		
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	RW:				
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	CA 2488534	AA	20031231	CA 2003-2488534	20030617
	AU 2003269890	A1	20040106	AU 2003-269890	20030617
	EP 1551421	A2	20050713	EP 2003-751777	20030617
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2005530843	T2	20051013	JP 2004-515870	20030617
PRAI	US 2002-390579P	P	20020621		
	WO 2003-US19172	W	20030617		
OS	MARPAT 140:42424				
GI					



AB The present invention provides nucleoside compds. I, wherein B is nucleobase; R1 is fluoromethyl, difluoromethyl, trifluoromethyl; R2 is H, F, amino, OH, SH, alkoxy, alkylcarbonyloxy, alkyl; R3 and R4 are independently H, Cn, N3, halogen, OH, SH, amino, alkoxy, alkylcarbonyloxy, alkenyl, alkynyl; R5 is H, alkylcarbonyl, P3O9H4, P2O6H3, phosphophonyl; R6 and R7 independently H, Me, hydroxymethyl, fluoromethyl; and certain derivs. thereof which are inhibitors of RNA-dependent RNA viral polymerase. These compds. are inhibitors of RNA-dependent RNA viral replication and are useful for the treatment of RNA-dependent RNA viral infection. They are particularly useful as inhibitors of hepatitis C virus (HCV) NS5B polymerase, as inhibitors of HCV replication, and/or for the treatment of hepatitis C infection. The invention also describes pharmaceutical compns. containing such nucleoside compds. alone or in combination with other agents active against RNA-dependent RNA viral infection, in particular HCV infection. Also disclosed are methods of inhibiting RNA-dependent RNA polymerase, inhibiting RNA-dependent RNA viral replication, and/or treating RNA-dependent RNA viral infection with the nucleoside compds. of the present invention. Thus, 2-amino-9-(2-C-fluoromethyl-β-D-ribofuranosyl)-3,9-dihydropurin-6-one was prepared and tested as inhibitor of RNA-dependent RNA viral polymerase. Title compds. tested in the HCV NS5B polymerase assay exhibited IC50's less than 100 μmol.

IT 636581-94-7P 636581-95-8P 636582-00-8P

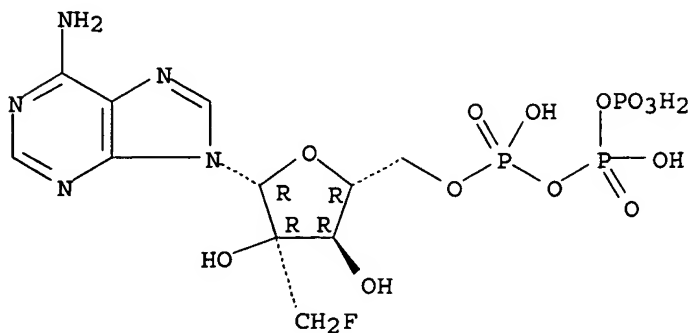
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of nucleoside derivs. as inhibitors of RNA-dependent RNA viral polymerase)

RN 636581-94-7 CAPLUS

CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-C-(fluoromethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

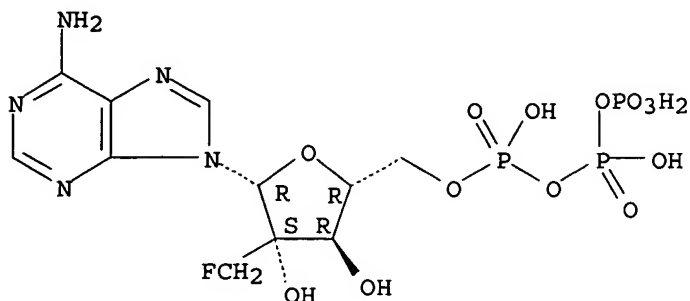


RN 636581-95-8 CAPLUS

CN 9H-Purin-6-amine, 9-[2-C-(fluoromethyl)-5-O-[hydroxy[hydroxy(phosphonooxy)]phosphoryl]oxy]-9H-purin-6-amine

]phosphinyl]oxy]phosphinyl]-β-D-arabinofuranosyl]- (9CI) (CA INDEX NAME)

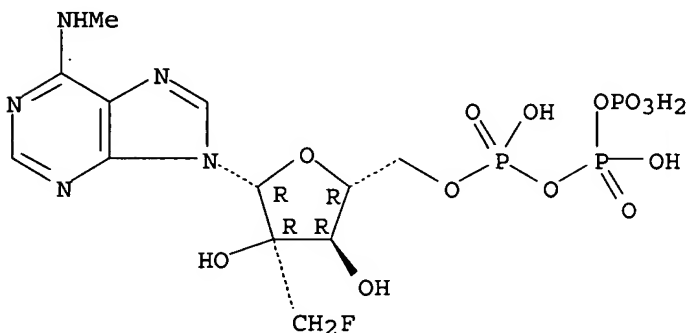
Absolute stereochemistry.



RN 636582-00-8 CAPLUS

CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-C-(fluoromethyl)-N-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:247410 CAPLUS

DN 139:111121

TI Inhibition of Hepatitis C Virus RNA Replication by 2'-Modified Nucleoside Analogs

AU Carroll, Steven S.; Tomassini, Joanne E.; Bosserman, Michele; Getty, Krista; Stahlhut, Mark W.; Eldrup, Anne B.; Bhat, Balkrishen; Hall, Dawn; Simcoe, Amy L.; LaFemina, Robert; Rutkowski, Carrie A.; Wolanski, Bohdan; Yang, Zhucheng; Migliaccio, Giovanni; De Francesco, Raffaele; Kuo, Lawrence C.; MacCoss, Malcolm; Olsen, David B.

CS Department of Biological Chemistry, Merck Research Laboratories, West Point, PA, 19486, USA

SO Journal of Biological Chemistry (2003), 278(14), 11979-11984

CODEN: JBCHA3; ISSN: 0021-9258

PB American Society for Biochemistry and Molecular Biology

DT Journal

LA English

AB The RNA-dependent RNA polymerase (NS5B) of hepatitis C virus (HCV) is essential for the replication of viral RNA and thus constitutes a valid target for the chemotherapeutic intervention of HCV infection. In this report, we describe the identification of 2'-substituted nucleosides as inhibitors of HCV replication. The 5'-triphosphates of 2'-C-methyladenosine and 2'-O-methylcytidine are found to inhibit NS5B-catalyzed RNA synthesis in vitro, in a manner that is competitive with substrate nucleoside triphosphate. NS5B is able to incorporate

either nucleotide analog into RNA as determined with gel-based incorporation assays but is impaired in its ability to extend the incorporated analog by addition of the next nucleotide. In a subgenomic replicon cell line, 2'-C-methyladenosine and 2'-O-methylcytidine inhibit HCV RNA replication. The 5'-triphosphates of both nucleosides are detected intracellularly following addition of the nucleosides to the media. However, significantly higher concns. of 2'-C-methyladenosine triphosphate than 2'-O-methylcytidine triphosphate are detected, consistent with the greater potency of 2'-C-methyladenosine in the replicon assay, despite similar inhibition of NS5B by the triphosphates in the in vitro enzyme assays. Thus, the 2'-modifications of natural substrate nucleosides transform these mols. into potent inhibitors of HCV replication.

IT 374750-27-3

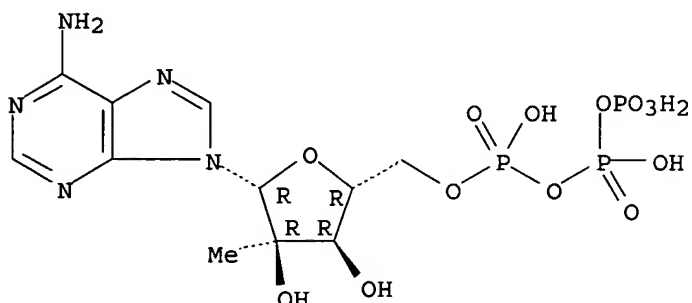
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(inhibition of hepatitis C virus RNA replication by 2'-modified nucleoside analogs)

RN 374750-27-3 CAPLUS

CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:555629 CAPLUS

DN 137:125359

TI Preparation of nucleoside derivatives as inhibitors of RNA-dependent RNA viral polymerase

IN Carroll, Steven S.; Lafemina, Robert L.; Hall, Dawn L.; Himmelberger, Amy L.; Kuo, Lawrence C.; Maccoss, Malcolm; Olsen, David B.; Rutkowski, Carrie A.; Tomassini, Joanne E.; An, Haoyun; Bhat, Balkrishen; Bhat, Neelima; Cook, Phillip Dan; Eldrup, Anne B.; Guinosso, Charles J.; Prhavc, Marija; Prakash, Thazha P.

PA Merck & Co., Inc., USA; Isis Pharmaceuticals, Inc.

SO PCT Int. Appl., 235 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002057425	A2	20020725	WO 2002-US1531	20020118
	WO 2002057425	A3	20050421		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA,				

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 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,  
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

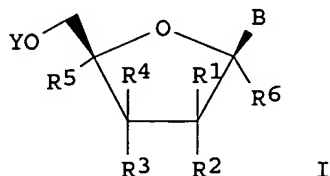
CA 2433878	AA	20020725	CA 2002-2433878	20020118
US 2002147160	A1	20021010	US 2002-52318	20020118
US 6777395	B2	20040817		
CN 1498221	A	20040519	CN 2002-806977	20020118
JP 2004532184	T2	20041021	JP 2002-558479	20020118
EP 1539188	A2	20050615	EP 2002-709095	20020118

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

US 2004072788	A1	20040415	US 2003-431657	20030507
ZA 2003005078	A	20040521	ZA 2003-5078	20030630
US 2004067901	A1	20040408	US 2003-688691	20031017
US 2004110717	A1	20040610	US 2004-250873	20040116
US 2005272676	A1	20051208	US 2005-200499	20050809

PRAI US 2001-263313P P 20010122  
 US 2001-282069P P 20010406  
 US 2001-299320P P 20010619  
 US 2001-344528P P 20011025  
 US 2002-52318 A3 20020118  
 WO 2002-US1531 W 20020118  
 US 2003-431657 B1 20030507

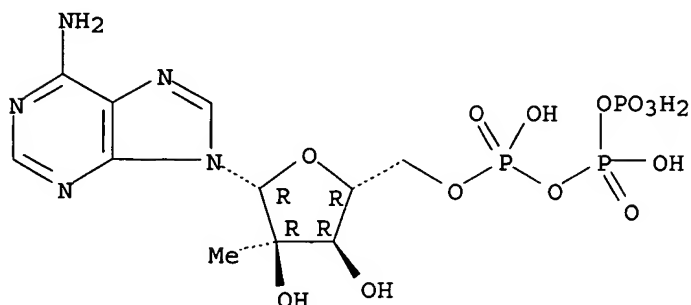
OS MARPAT 137:125359  
 GI



AB The present invention provides the preparation of nucleoside compds. I, wherein B is nucleobase, Y is H, alkylcarbonyl, phosphate; R1 is H, alkenyl, alkynyl, alkyl; R2 and R3 are independently H, OH, halogen, alkyl, alkoxy, alkenyloxy, alkylthio, alkylcarbonyloxy, aryloxyrcrbonyl, azido, amino, alkylamino; R1 and R2 together with the carbon atom to which they are attached form a 3- to 6-membered heterocycle; R4 is H, OH, SH, NH<sub>2</sub>, alkylamino, cycloalkylamino, halogen, alkyl, alkoxy, CF<sub>3</sub>; R5 and R6 are independently H, hydroxymethyl, Me, fluoromethyl; and certain derivs. thereof which are inhibitors of RNA-dependent RNA viral polymerase. These compds. are inhibitors of RNA-dependent RNA viral replication and are useful for the treatment of RNA-dependent RNA viral infection. They are particularly useful as inhibitors of hepatitis C virus (HCV) NS5B polymerase, as inhibitors of HCV replication, and/or for the treatment of hepatitis C infection. The invention also describes pharmaceutical compns. containing such nucleoside compds. alone or in combination with other agents active against RNA-dependent RNA viral infection, in particular HCV infection. Also disclosed are methods of inhibiting RNA-dependent RNA polymerase, inhibiting RNA-dependent RNA viral replication, and/or treating RNA-dependent RNA viral infection with the nucleoside compds. of the present invention. Thus, 4-amino-1-(2-C-methyl-β-D-ribofuranosyl)-1H-pyrazolo[3,4-d]pyrimidine was prepared as inhibitors of RNA-dependent RNA viral polymerase. Representative compds. tested in the HCV NS5B polymerase assay exhibited IC's less than 100 μM. The compds. of the present invention were also evaluated for their ability to affect the replication of Hepatitis C Virus RNA in cultured hepatoma (HuH-7) cells containing a sub-genomic HCV Replicon.

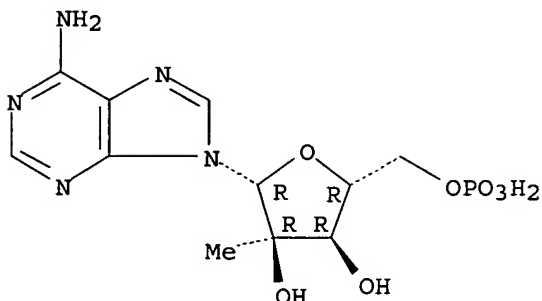
IT 374750-27-3P 444019-70-9P 444020-86-4P  
 RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN  
 (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);  
 PREP (Preparation); USES (Uses)  
 (preparation of nucleoside derivs. as inhibitors of RNA-dependent human RNA  
 viral polymerase)  
 RN 374750-27-3 CAPLUS  
 CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-C-methyl- (9CI) (CA INDEX  
 NAME)

Absolute stereochemistry.



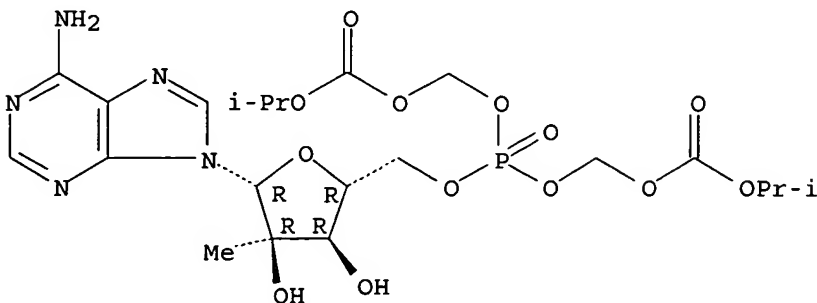
RN 444019-70-9 CAPLUS  
 CN 5'-Adenylic acid, 2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 444020-86-4 CAPLUS  
 CN 5'-Adenylic acid, 2'-C-methyl-, bis[[[(1-methylethoxy)carbonyl]oxy]methyl]  
 ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.





AN 2001:886155 CAPLUS  
 DN 136:590  
 TI Methods and compositions using modified nucleosides for treating  
 flaviviruses and pestiviruses  
 IN Sommadossi, Jean-Pierre; Lacolla, Paolo  
 PA Novirio Pharmaceuticals Limited, Cayman I.; Universita Degli Studi Di  
 Cagliari  
 SO PCT Int. Appl., 302 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001092282	A2	20011206	WO 2001-US16687	20010523
	WO 2001092282	A3	20020502		
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	CA 2410579	AA	20011206	CA 2001-2410579	20010523
	EP 1294735	A2	20030326	EP 2001-952131	20010523
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	US 2003060400	A1	20030327	US 2001-863816	20010523
	US 6812219	B2	20041102		
	BR 2001011196	A	20040406	BR 2001-11196	20010523
	JP 2004510698	T2	20040408	JP 2002-500895	20010523
	NO 2002005600	A	20030117	NO 2002-5600	20021121
	ZA 2002010112	A	20040623	ZA 2002-10112	20021212
	US 2004063622	A1	20040401	US 2003-602693	20030620
	US 2004097462	A1	20040520	US 2003-602692	20030620
	US 2004102414	A1	20040527	US 2003-602694	20030620
PRAI	US 2000-207674P	P	20000526		
	US 2001-283276P	P	20010411		
	US 2001-863816	A3	20010523		
	WO 2001-US16687	W	20010523		
OS	MARPAT 136:590				
AB	A method and composition are provided for treating a host infected with flavivirus or pestivirus, comprising administering an effective amount of a 1', 2' or 3'-modified nucleoside or a pharmaceutically acceptable salt or prodrug thereof.				
IT	374750-27-3				
	RL: BSU (Biological study, unclassified); PKT (Pharmacokinetics); BIOL (Biological study) (nucleoside derivs. for treating flaviviruses and pestiviruses)				
RN	374750-27-3 CAPLUS				
CN	Adenosine 5'-(tetrahydrogen triphosphate), 2'-C-methyl- (9CI) (CA INDEX NAME)				

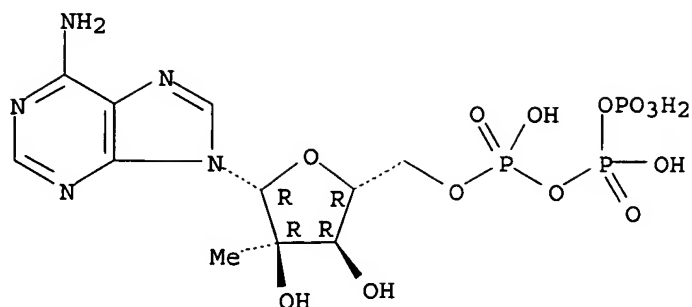
Absolute stereochemistry.

*6,812,219 - phosphate esters -*

*column 109 - 110 wherein*

*$R^1 = \text{diphosphate}$ ,  $R^2 = H$  or  $R^3$ ,  $R^4 = CH_3$ ,  $X = O$ ,*

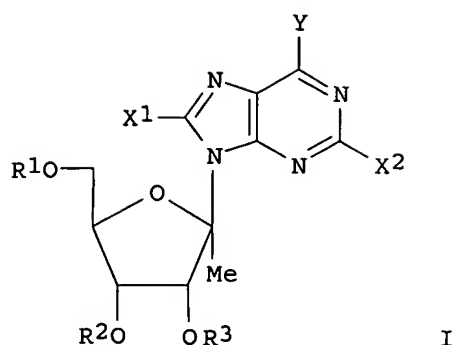
*Base = adenine*



L4 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 2001:868467 CAPLUS  
DN 136:6296  
TI Preparation of antiviral nucleosides and methods for treating hepatitis C virus  
IN Sommadossi, Jean-Pierre; Lacolla, Paulo  
PA Novirio Pharmaceuticals Limited, Cayman I.; Universita degli Studi di Cagliari  
SO PCT Int. Appl., 296 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001090121	A2	20011129	WO 2001-US16671	20010523
	WO 2001090121	A3	20020502		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	CA 2409613	AA	20011129	CA 2001-2409613	20010523
	AU 2001074906	A5	20011203	AU 2001-74906	20010523
	US 2003050229	A1	20030313	US 2001-864078	20010523
	US 6914054	B2	20050705		
	EP 1292603	A2	20030319	EP 2001-941564	20010523
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
	BR 2001011127	A	20030624	BR 2001-11127	20010523
	JP 2004533401	T2	20041104	JP 2001-586308	20010523
	NZ 522863	A	20050729	NZ 2001-522863	20010523
	EP 1669364	A2	20060614	EP 2006-75216	20010523
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, RO, CY, TR			
	NO 2002005627	A	20030106	NO 2002-5627	20021122
	ZA 2002010101	A	20040614	ZA 2002-10101	20021212
	US 2004097461	A1	20040520	US 2003-602691	20030620
	US 2004101535	A1	20040527	US 2003-602976	20030620
	US 2005124532	A1	20050609	US 2003-602142	20030620
	US 2005137161	A1	20050623	US 2003-602136	20030620
PRAI	US 2000-206585P	P	20000523		
	EP 2001-941564	A3	20010523		
	US 2001-864078	A1	20010523		
	WO 2001-US16671	W	20010523		
OS	MARPAT 136:6296				

GI



AB A method and composition for treating a host infected with hepatitis C comprising administering an effective hepatitis C treatment amount of a described 1'-, 2'- or 3'-modified nucleosides I, wherein : R1-R3 and R are independently H, phosphate (including mono, di- or triphosphate and a stabilized phosphate prodrug); acyl; alkyl; sulfonate ester including alkyl or arylalkyl sulfonyl including methanesulfonyl and benzyl, wherein the Ph group is optionally substituted with one or more substituents as described in the definition of aryl given herein; a lipid, including a phospholipid; an amino acid; a carbohydrate; a peptide; a cholesterol; or other pharmaceutically acceptable leaving group which when administered in vivo is capable of providing a compound wherein R1-R3 are independently H or phosphate; Y is hydrogen, bromo, chloro, fluoro, iodo, OR4, NR4R5 or SR4; X1 and X2 are independently selected from the group consisting of H, straight chained, branched or cyclic alkyl, CO-alkyl, CO-aryl, CO-alkoxyalkyl, chloro, bromo, fluoro, iodo, OR4, NR4R5 or SR4; and R4 and R5 are independently hydrogen, acyl, alkyl or a pharmaceutically acceptable salt or prodrug thereof, is provided. Thus, I (R1-R3 = X1 = X2 = H, Y = NH2) was prepared and tested in Cynomolgus monkeys as antiviral agent. Oral bioavailability in monkeys, bone human bone marrow toxicity (IC50 > 10  $\mu$ M), and mitochondrial toxicity, were reported .

IT 374750-27-3P

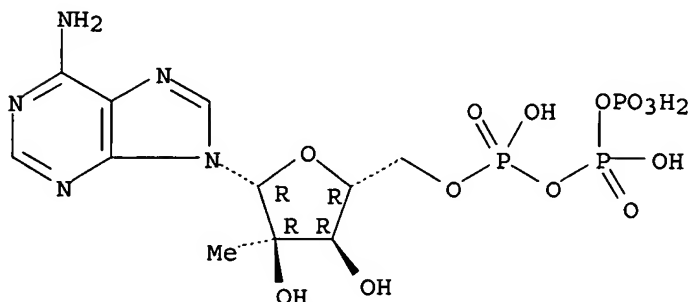
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of antiviral nucleosides and methods for treating hepatitis C virus)

RN 374750-27-3 CAPLUS

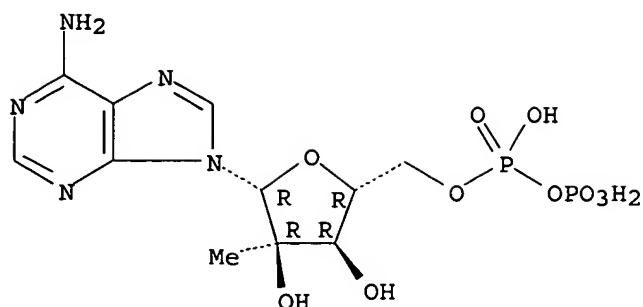
CN Adenosine 5'-(tetrahydrogen triphosphate), 2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1996:169523 CAPLUS  
 DN 124:224779  
 TI Mechanism-based inhibition of ribonucleoside diphosphate reductase from  
 corynebacterium nephridii by 2'-C-methyladenosine diphosphate  
 AU McFarlan, Sara C.; Ong, Seng Poon; Hogenkamp, Harry P. C.  
 CS Department of Biochemistry, University of Minnesota, Minneapolis, MN,  
 55455, USA  
 SO Biochemistry (1996), 35(14), 4485-91  
 CODEN: BICHAW; ISSN: 0006-2960  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB The interaction of the adenosylcobalamin-dependent ribonucleoside  
 diphosphate reductase of *Corynebacterium nephridii* with  
 2'-C-methyladenosine diphosphate (2'-C-methylADP) has been investigated in  
 more detail [Ong, S. P., McFarlan, S. C., & Hogenkamp, H. P. C. (1993)  
*Biochem. 32*, 11397-11404]. This nucleotide analog partitioned between  
 normal reduction to 2'-deoxy-2'-C-methyladenosine diphosphate and  
 decomposition to  
 adenine, 2-methylene-3(2H)-4-methylfuranone, and presumably pyrophosphate.  
 Reaction of the reduced enzyme with 2'-C-methylADP caused the development  
 of a chromophore at 318 nm that is characteristic of the modification of  
 the enzyme by the furanone [Harris, G., Ator, M., & Stubbe, J. (1984)  
*Biochem. 23*, 5214-5225]. Incubation of [5'-3H2]-2'-C-methylADP with  
 reduced reductase resulted in the covalent incorporation of the radiolabel  
 into the protein and into aquocobalamin. A similar incubation of the  
 enzyme, the labeled nucleotide analog, and dithiothreitol resulted in the  
 formation of three radioactive hydrophilic compds. Mass spectroscopic  
 anal. of one of these compds. showed the presence of 2-methylene-3(2H)-4-  
 methylfuranone. 2'-Deoxy-2'-C-methylADP is a very effective promoter of  
 the tritium exchange reaction between [5'-3H2]adenosylcobalamin and the  
 solvent, confirming that the exchange reaction is an integral part of the  
 overall reduction. All these observations are consistent with the proposal  
 that 2'-C-methylADP serves as a substrate and a mechanism-based inhibitor  
 of the ribonucleotide reductase of *C. nephridii*, indicating that the  
 enzyme is able to catalyze the conversion of the nucleotide analog to a  
 2'-deoxy-2'-C-methyl-3'-ketonucleotide that can collapse to the reactive  
 2-methylene-3(2H)-4-methylfuranone. Surprisingly, 2'-C-methylADP did not  
 serve as either a substrate or an inhibitor of the ribonucleoside  
 diphosphate reductase of *Escherichia coli*.  
 IT 150993-72-9  
 RL: BAC (Biological activity or effector, except adverse); BPR (Biological  
 process); BSU (Biological study, unclassified); BIOL (Biological study);  
 PROC (Process)  
 (mechanism-based inhibition of ribonucleoside diphosphate reductase  
 from *Corynebacterium nephridii* by 2'-C-methyladenosine diphosphate)  
 RN 150993-72-9 CAPLUS  
 CN Adenosine 5'-(trihydrogen diphosphate), 2'-C-methyl- (9CI) (CA INDEX  
 NAME)

Absolute stereochemistry.



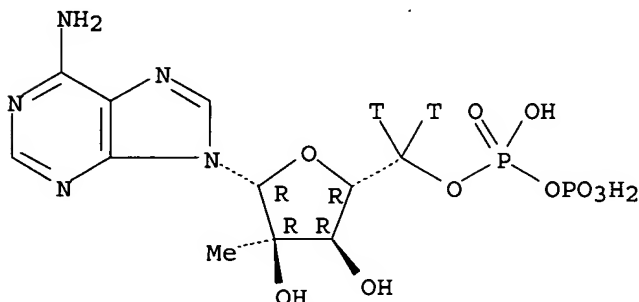
IT 174753-96-9P

RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process) (preparation of tritiated 2'-C-methyladenosine diphosphate for study of mechanism-based inhibition of ribonucleoside diphosphate reductase from *Corynebacterium nephridii*)

RN 174753-96-9 CAPLUS

CN Adenosine-5',5'-C-t2 5'-(trihydrogen diphosphate), 2'-C-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1993:620274 CAPLUS

DN 119:220274

TI 2'-C-Methyladenosine and 2'-C-methyluridine 5'-diphosphates are mechanism-based inhibitors of ribonucleoside diphosphate reductase from *Corynebacterium nephridii*

AU Ong, Seng Poon; McFarlan, Sara C.; Hogenkamp, Harry P. C.

CS Dep. Biochem., Univ. Minnesota, Minneapolis, MN, 55455, USA

SO Biochemistry (1993), 32(42), 11397-404

CODEN: BICHAW; ISSN: 0006-2960

DT Journal

LA English

AB The interaction of the adenosylcobalamin-dependent ribonucleoside diphosphate reductase of *Corynebacterium nephridii* with 2'-C-methyladenosine 5'-diphosphate (2'-MeADP) and 2'-C-methyluridine 5'-diphosphate (2'-MeUDP) has been investigated. The nucleotide analogs are converted to adenine and uracil, resp., suggesting that they may be mechanism-based inhibitors. In addition, both analogs generate nucleotides with properties expected for the 2'-deoxy-2'-C-methylnucleotides. The nucleoside obtained after enzymic dephosphorylation of the product formed from 2'-MeADP has been identified as 2'-deoxy-2'-C-methyladenosine by <sup>1</sup>H NMR and mass spectroscopies. Adenine is the major product derived from 2'-MeADP, indicating that the degradation pathway predominates. During the reaction, the carbon-cobalt bond of the coenzyme is cleaved irreversibly

to yield 5'-deoxyadenosine and cob(II)alamin. 2'-MeADP is a potent competitive inhibitor of the reduction of the purine nucleotides ADP and GDP, while 2'-MeUDP competitively inhibits the reduction of the pyrimidine nucleotides UDP and CDP. 2'-MeADP is a very effective promoter of the tritium exchange reaction between [5'-3H2]adenosylcobalamin and the solvent, indicating that the exchange reaction is an integral part of the overall reduction. All these observations are consistent with the reaction mechanism proposed by Stubbe and co-workers [Harris, G., Ashley, G. W., Robins, M. J., Tolman, R. L., & Stubbe, I. (1987) Biochem. 26, 1895-1902 (1987); Stubbe, J. (1990) J. Biol. Chemical 265, 5329-5332] in which they suggest that the partitioning between reduction and inactivation occurs at the level of the 2'-deoxy-3'-keto ribonucleotide intermediate.

IT 150993-72-9P

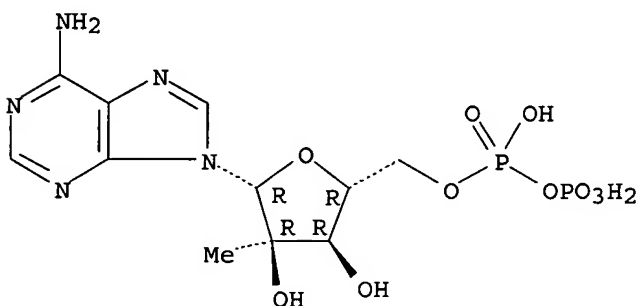
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and ribonucleotide diphosphate reductase of Corynebacterium nephridii inhibition by, enzyme mechanism in relation to)

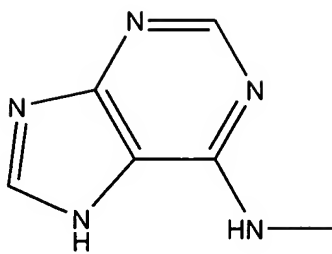
RN 150993-72-9 CAPLUS

CN Adenosine 5'-(trihydrogen diphosphate), 2'-C-methyl- (9CI) (CA INDEX NAME)

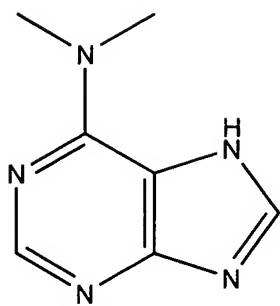
Absolute stereochemistry.



10/530,627



6-methylaminopurine



6-dimethylaminopurine